



MALI LIVESTOCK FOR GROWTH (L4G)

FY 2017- IMPLEMENTATION
YEAR II ANNUAL REPORT

OCTOBER 1, 2015 – SEPTEMBER 30, 2016

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ACRONYMS AND ABBREVIATIONS

AE	<i>Auxiliaire d'Élevage</i> (Auxiliary Veterinarian)
AOPP	Association of Professional Peasant Farmer Organizations
APESS	Association for the Promotion of Livestock in the Sahel and Savana
BOA	Bank of Africa
BMS	<i>Banque Malienne de Solidarité</i> (Malian Solidarity Bank)
COP	Chief of Party
COR	Contracting Officer's Representative
CSO	Civil Society Organization
CVC	Cereal Value Chain Project
DEAR	Double Entry Accounting Register
DCA	Development Credit Authority
DCOP	Deputy Chief of Party
DRPIA	<i>Direction Régionale de Productions et Industries Animales</i> (Regional Office of Production and Animal Industries)
DRSV	<i>Direction Régionale de Services Vétérinaires</i> (Regional Office of Veterinary Services)
EMMP	Environmental Mitigation Plan
FEBEVIM	<i>Fédération Nationale de la Filière Bétail et Viande</i> (National Federation of Meat and Livestock Producers)
FMD	Foot and Mouth Disease
FtF	Feed the Future
FOFBEV	<i>Fédération des Organisations de la Filière Bétail-viande</i> (Federation of the Livestock Sector for Mopti Region)
GOM	Government of Mali
ICRISAT	Institute for Crop Research in the Semi-Arid Tropics
IER	<i>Institut d'Economie Rurale</i> (Rural Economy Institute)
IESC	International Executive Service Corps
IFP	<i>Institut de Formation Professionnelle</i> (Bankass Agricultural Technical School)
IR	Intermediate Result
LCV	<i>Laboratoire Central Veterinaire</i> (Central Veterinary Laboratory)
L4G	Livestock for Growth
LAB	Livestock as a Business
M&E	Monitoring and Evaluation
MDR	Ministry of Rural Development
MFI	Microfinance Institution
NGO	Non-Governmental Organization
OHADA	L'Organisation pour l'Harmonisation en Afrique du Droit des Affaires
OVM	<i>Ordre des Vétérinaires de Mopti</i> , Mopti Veterinarians Organization
PADESO	<i>Programme d'Appui au Développement Durable de l'Élevage au Sahel Occidental</i> (Support Program for Sustainable Livestock Development in the West Sahel)
PAMF	<i>Première Agence de Micro-finance</i> (First Agency of Microfinance)
PMP	Performance Monitoring Plan
PO	Producer Organization
PSA	Public Service Announcement
STTA	Short-Term Technical Assistance
SVPP	<i>Services Vétérinaires Privés de Proximité</i> (Private Close-by Veterinary Services)
TLU	Tropical Livestock Unit
VA	Village Animator

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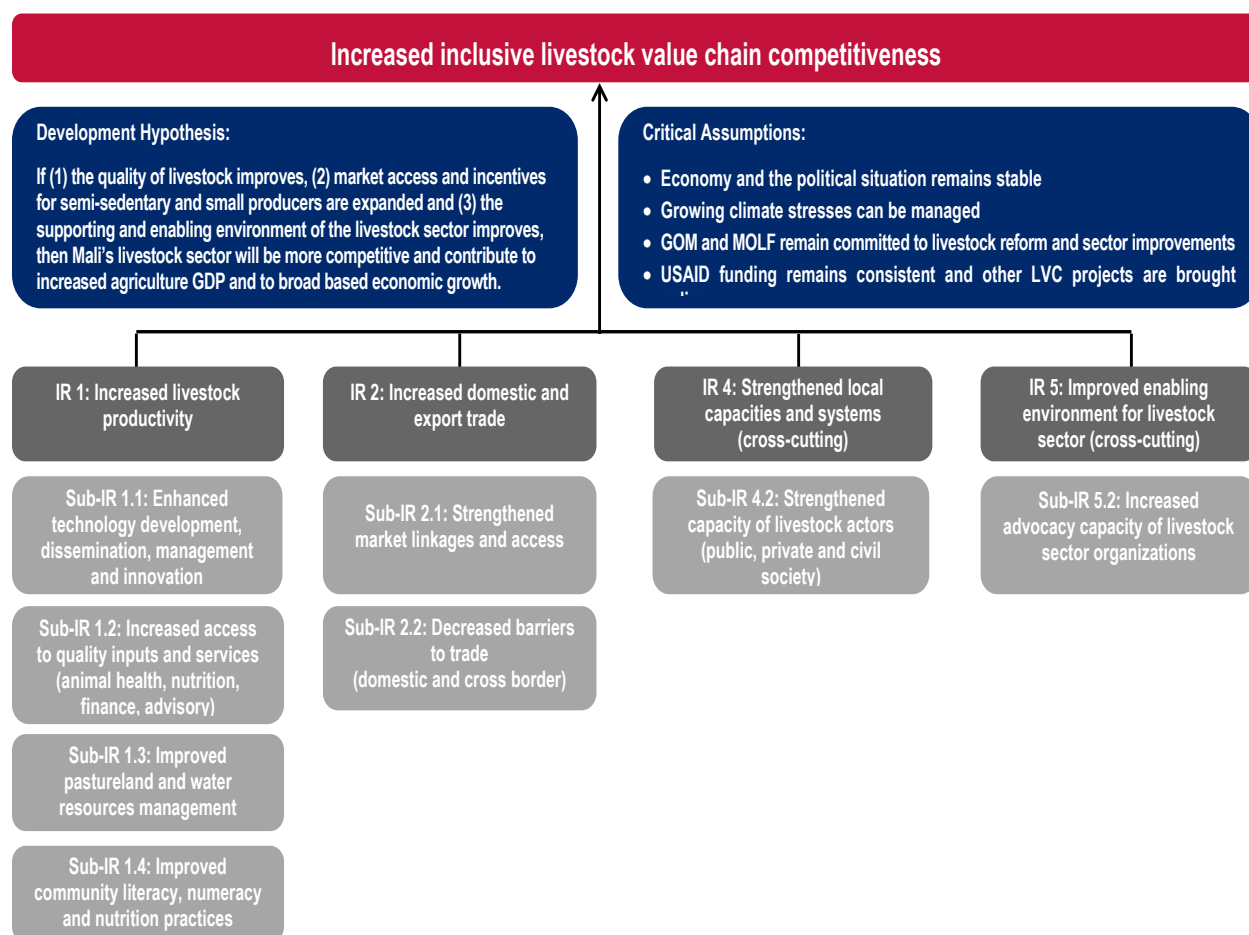
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INTRODUCTION AND OVERVIEW

The key goal of the USAID Mali Livestock for Growth (L4G) program is to improve the quality of livestock, expand market access and incentives, and include poorer households in livestock value chain development. The program targets herders and small producers who do not have reliable access to inputs or financial services, particularly female producers, who are largely isolated from markets and training programs due to cultural norms. L4G also considers youth to be a vulnerable population due to their lack of access to education, land, financial services, extension services, and high rates of unemployment.

The IRs and Sub-IRs for which L4G is responsible are listed in Figure I below.

Figure I. USAID/Mali Results Framework



L4G works closely with USAID-Mali's Accelerated Economic Growth (AEG) complementary programs and projects to achieve a strengthened and vibrant private sector, improved access to finance, scaled-up actions in household nutrition and hygiene, and an improved enabling environment for business expansion. The IRs and Sub-IRs for which the L4G program is responsible are as follows:

Component I. Increased livestock productivity (see IR 1)

I.1: Enhanced technology innovation, development, dissemination, and management

- I.2: Increased access to quality inputs and services
(animal health and nutrition and livestock advisory services)
- I.3: Improved pastureland and water resource management
- I.4: Improved community literacy, numeracy, and nutrition and hygiene practices

Component 2. Increased domestic and export livestock trade (see IR 2)

- 2.1: Strengthened market access and linkages (both vertical and horizontal linkages along the livestock value chain), including access to financial services and strengthened organizational capacities
- 2.2: Decreased barriers to trade (such as through participation of livestock groups in policy dialogue at the regional or cross-border level, improving transport services)

Component 3. Strengthened local capacities and systems (see IR 4)

- 4.1: Strengthened capacity of livestock value chain actors (public, private and civil society).
(See Sub IR 4.2)

Component 4. Improved enabling environment for livestock sector (see IR 5)

- 5.1: Increased capacity of universities, think tanks, and civil society for policy analysis and advocacy.
(See Sub IR 5.2)

HIGHLIGHTS

Year 2 of the L4G program was marked by intensive staff efforts to leverage increases in livestock productivity into more domestic and export sales of livestock, in line with the new market-oriented strategy which the program adopted in June 2016. L4G staff facilitated and promoted business relationships among and between livestock value chain participants within Mali and throughout the West Africa region. Thus, L4G **exceeded** the value of projected livestock exports in FY 2016 by 346%, facilitating the export of more than 7000 head with a **value of more than \$4.6 million**. L4G also successfully increased livestock productivity as animal fatteners adopt L4G disseminated new technology and techniques. In FY 2016, livestock productivity exceeded expectations, as measured by fatteners' gross margins per head with fatteners making **\$246 (US) per head of cattle**, 503% of the target and **\$66 (US) per head of sheep**, 166% of the target.

In FY 2016, L4G updated its study on the "Non-tariff Barriers to Livestock Trade," which concludes that: (i) there are tariff and non-tariff barriers to export livestock from Mali; (ii) the bureaucratic issuance of documents required for exports is time consuming; and (iii) there are high transaction costs on the key transport corridors for exporting livestock from Mopti, for example, to Dakar (Senegal) and Abidjan (Cote d'Ivoire). The study's conclusions and recommendations have created an erudite basis to engage government officials and private sector stakeholders in a dialogue about reducing or eliminating non-tariff barriers to the livestock trade, such as the high number of checkpoints, the considerable wait time per checkpoint (an average of 47 minutes), and the multiplicity of government players involved in issuing the required documents for export.

L4G made a first, impressive venture into facilitating the export of livestock to the neighboring countries of Guinea and Senegal. A mission to Dakar (Senegal) in July 2016 brought together Senegalese buyers, Malian sellers, and Malian and Senegalese officials to facilitate sheep exports and to create business relationships for future livestock trading. The meeting culminated in: (i) confirmation of the significant demand in Senegal for Malian livestock; (ii) the Senegalese giving L4G a directory of important livestock and trade contacts in Senegal, including government officials; and (iii) the Senegalese Minister of Animal Husbandry visiting Bamako afterwards to argue the case for reducing livestock export barriers. L4G's mission to Conakry (Guinea) in August 2016 brought together Guinean public sector officials, private sector livestock importers and buyers, with Malian stakeholders to facilitate Tabaski holiday sales as well as to pave the way

for future livestock exports to Guinea. Based on the results of these missions, the L4G program will work in partnerships with other donor-funded projects and programs, such as the USAID-funded West Africa Trade Hub, to facilitate and promote increased Malian livestock exports.

During FY 2016, the *Services Vétérinaires Privés de Proximité* (Private Close-by Veterinary Services or SVPP) continued to expand across the USAID designated Feed the Future Zone of Influence. In FY 2016, 70 *Auxiliaires d'Élevage* (AEs) or Auxiliary Veterinarians (AVs) completed seven training modules that had been launched in FY 2015, making them fully knowledgeable and functional. L4G supported both AEs and veterinarians to vaccinate livestock and small ruminants against local diseases, launch a deworming effort at the beginning and end of the rainy season and treat other diseases. In addition, L4G supported the veterinarians to strengthen their businesses by focusing on developing an approach to generate a private sector revenue stream through fees for services.

L4G staff encouraged and facilitated the adoption and scaling out of dual-purpose varieties of forage crops in FY 2016, including groundnuts and cowpeas. L4G also trained 398 people in techniques on urea-enhanced hay and salt licks to augment livestock fattening and nutrition efforts. Producing forage with the right combination of inputs is critical to maximizing animal fattening potential and L4G staff made this message the focus of their training. To augment forage production, L4G introduced new technologies into the program by subsidizing the purchase of four locally made forage choppers as a pilot project to demonstrate the technology. Costing an estimated \$1,090 (US), the forage chopper can be used to shred post-harvest, left-over crop stover or stems and groundnut shells that livestock otherwise could not consume. The result is a reduction in post-harvest plant waste from about 80% to 20%. The Producer Organizations (POs) with forage choppers can produce forage for their own livestock and sell forage to other herders to augment their income. Preliminary data shows that one PO with a forage chopper in Bankass produced up to 16 cart-loads of hay from millet stalks per day, thereby earning over 30,000 FCFA per day. L4G will be collecting more data from the other POs on their use of the forage choppers and any revenue earned in FY 2017.

COMPONENT I: INCREASED LIVESTOCK PRODUCTIVITY

Livestock production in Mali is mired in a cycle of low investment and low return. Herds are not managed optimally and do not achieve maximum productivity or quality for domestic and export trade. Producers' risk mitigation strategies as well as a weak operating environment result in less than optimal productivity and thus weak competitiveness. L4G's approach is to introduce proven and new technologies, increase access to and use of high-quality inputs and services, improve exploitation of traditional pastureland, and improve human literacy, nutrition, and hygiene in ways that will contribute to increased productivity in the livestock sector.

I.1 ENHANCED TECHNOLOGY INNOVATION, DISSEMINATION, AND MANAGEMENT

The L4G approach to enhancing technology innovation, dissemination, and management focuses on building the capacity of local private sector service providers – including private veterinarians, AEs, and input suppliers – to respond to the needs of semi-sedentary, women, and youth producers, and improving the means and media for delivering critical information to producers. In its second year of operation, L4G continued working in partnership with key industry stakeholders to foster critical linkages between producers, extension agents, input suppliers, and other advisory service providers to promote good livestock management practices and introduce relevant, scalable solutions that can catalyze improvements in herd management practices.

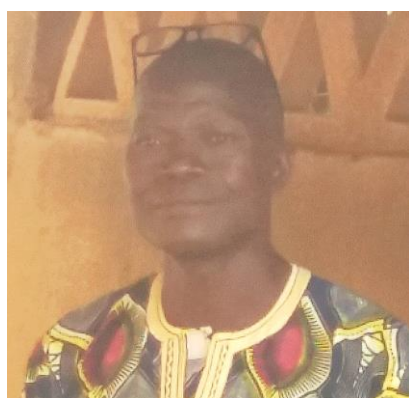
TASK 1.1.1 MODERNIZE ANIMAL HEALTH DELIVERY SYSTEMS

L4G continued to develop its *Services Vétérinaires Privés de Proximité* (SVPP) model, which brings together private professionals involved in animal health to render high quality veterinary services (care, medicine, vaccination) more accessible and affordable. SVPP encourages private veterinarians to expand beyond vaccination to focus more broadly on animal health and expands the number and quality of *Auxillaires d'Elevage* (AEs) to provide animal fattening and animal health services in tandem with private veterinarians. The services of the AE are more limited, but also more affordable.

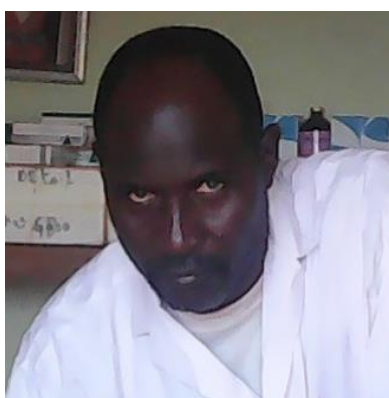
CERTIFYING PRIVATE VETERINARIANS

A core component of L4G's initiative to improve livestock health is partnering with aspiring entrepreneurial veterinarians who align themselves with the SVPP model and who think holistically about animal health services as a business. Two veterinarians with SVPP certification were identified in the first year of the program. In FY2016, L4G helped expand their operational capacity, service offerings, and geographical coverage. A third veterinarian became fully certified in SVPP in January 2016. The veterinarians successfully created business plans in January 2016 to strategically guide their expansion of services and coverage area, and the business plans positioned them to be eligible to receive bank loans.

L4G reinforced the three private veterinarians' competencies on use of vaccines, proper disposal of sharps and glass vaccine containers, and procedures to ensure strict compliance with the required cold chain for live vaccines. Veterinarian services starter kits consisting of necessary furniture, refrigerators, freezers, air stabilizers, syringe guns, thermometers, needles, stethoscopes, stoves, surgical gloves, and other essential supplies were delivered to the three private veterinarians. In August 2015 L4G submitted its SVPP Strategy to USAID. L4G provided private veterinarians starter kits without any stipulations for reimbursement. The starter kits were valued at 1,740,000 CFA. The vets did not discount services for L4G clients, however, the program contributed to the cost of veterinarian services to decrease through supporting vets to develop business models/plans and training and extension of Auxiliary Vets.



BIRAMA DIAKITE COVERS NINE COMMUNES IN KORO CERCLE. IN FY2016 HE VACCINATED 60,213 ANIMALS AND DEWORMED ANOTHER 5,493 IN 172 VILLAGES. HIS REVENUE FOR THE YEAR WAS 5,500,000 CFA, OF WHICH 1,300,000 FCFA WAS PROFIT.



LAYA TOGO COVERS SIX COMMUNES IN BANKASS CERCLE. IN FY2016 HE VACCINATED 55,533 ANIMALS AND DEWORMED ANOTHER 269. OVER THE COURSE OF THE YEAR HIS REVENUES TOTALLED 5,553,300, OF WHICH HIS PROFIT WAS 1,176,850 FCFA.



HAMIDOU SOKANDA WORKS ACROSS SIX COMMUNES WITHIN BANKASS CERCLE. IN FY2016 HE VACCINATED 126,230 ANIMALS AND DEWORMED ANOTHER 27,512. HIS REVENUES TOTALLED 4,350,950 IN FY2016, OF WHICH 1,098,750 FCFA WAS PROFIT.

TECHNICAL TRAINING FOR AES

AEs connect more L4G clients to animal health services than the three private veterinarians would otherwise can do alone. L4G delivered a seven-module training for AEs in the first year of the program, concluding with a kick off celebration in September in Koro and Bankass cercles. In FY2016 L4G

continued providing professional development in business management, prophylaxis planning, and techniques for sensitizing rural communities on health and animal production. Annex I provides a breakdown of the trainings L4G provided in FY2016. L4G also conducted a midterm evaluation in May 2016.

VACCINATION CAMPAIGNS

L4G purchased vaccines from the *Laboratoire Central Veterinaire* (Central Veterinary Laboratory or LCV) in January 2016 to distribute to the three SVPPs for the 2016 vaccination campaign. The vaccines were provided on loan to promote sustainability of this and future vaccination campaigns. Administrative supplies and vaccination cold chain supplies (freezers, refrigerators, and insulated cooler boxes) were also procured for the vets to ensure success of the campaign. L4G signed memoranda of understanding (MOU) with the three registered private veterinarians to cover all 21 L4G Communes in Bankass and Koro Cercles. The MOUs delineate both parties' responsibilities related to support and resources provided, coordination, collaboration, accountability, and deliverables. The private vets are aided by the network of 77 L4G trained Auxiliary Veterinarians (*auxilieres d'elevage*) who assisted the veterinarians throughout the campaign.



DELIVERY OF EQUIPMENT AND VACCINES TO PRIVATE VETERINARIANS ON JANUARY 15, 2016 IN SÉVARE

In January, the Regional Director of Livestock Veterinary Services (DRSV) visited the three SVPP Private Vets and the Local Veterinary Services (SLV) to observe the initial outcomes of the vaccination campaign, which improved his understanding of his role in monitoring the private veterinarians' adherence to regulations during future vaccination campaigns. Leading up to the vaccination campaign, L4G hosted a technical meeting for 76 professionals and stakeholders to discuss the campaign and ensure that the veterinarians and AEs were engaged in appropriate and strategic campaign preparation and advertisement activities, such as marketing to the right target markets. The discussions from the workshop were integrated into public service announcements.

L4G exceeded its targets for vaccinating sheep and goats with Pastovin, met its target for vaccinating cattle with Pastobov and Symptovac, but fell short in both Peri TI and Ovipeste. Though produced in Mali, Ovipeste is only exported due to supply and demand constraints and thus it unavailable in Mali, so L4G did not have any vaccination results to report. The results of the FY2016 campaign are described in Table I below.

Table I: SVPP Vaccination Results against Goals

Vaccine	Animal	Coverage Goal %	Herd size	Koro		Bankass		
				Actual vaccine 1 SVPP	% Actual coverage	Herd size	Actual vaccine 2 SVPP	% Actual coverage
Péri TI	Cattle	40%	38,704	4,327	11%	83,829	36,266	43%
Pastobov + Symptovac	Cattle	30%	43,286	17,000	39%	69,858	36,875	53%
Pastovin	Sheep & goat	10%	102,541	38,645	38%	29,886	60,384	202%
Ovipeste	Sheep & goat	10%	64,501	0	0%	29,886	0	0%

In Table I above, Herd Size refers to the L4G target number of animals to be vaccinated. For sheep and goats in Bankass, L4G achieved its goal by 202 percent.

Overall revenues following the vaccination campaign were generally positive. L4G private veterinarian consultant Dr. Amadou Mahamadou trained the veterinarians and AEs in FY2015 and FY2016 noted that they made enormous progress but still face considerable hurdles, including limited financial resources, local visibility, and access to veterinary medicines. The AEs continue to evolve in the SVPP network and provided significant benefits to local populations by increasing access to animal health services, creating local jobs, and increasing the effectiveness of their interventions. Of the 27 Koro AEs who started the program, six have abandoned their practice but the remaining 21 are very active. Attrition was due to competing career opportunities, including gold mining, teaching, returning to studies, and a husband who did not support his wife's participation. During this vaccination campaign, they dewormed 8,831 animals and provided treatment to 833 others, earning 1.84 million FCFA in revenues.

1.2 PRESENCE OF PARASITIC AND OTHER DISEASES

LCV conducted a baseline study of parasitic and infectious diseases, described in more detail under Monitoring and Evaluation. The results gathered from LCV's exchanges with the supervisory technical agents and agro-pastoralists at the selected sites, as well the clinico-epidemiology investigations in the selected farms, and laboratory analyzes broadly allowed LCV to identify the following animal health constraints:

- Tuberculosis, Contagious Bovine Pleuropneumonia (CBPP), Foot and Mouth Diseases (FMD), brucellosis, parasitic blood diseases (babesiosis), gastro-intestinal (strongyloidiasis, strongyloides, ascaridiosis and coccidiosis) and ectoparasites (Hyalomma and Amblyomma Ticks) among cattle;
- PPR, pasteurellosis, gastrointestinal parasitic diseases (strongyloides, strongyloidiasis, ascaridiosis and coccidiosis) and blood babesiosis in small ruminants;
- Blood parasites (babesiosis and trypanosomiasis) and gastro-intestinal strongyloides and ectoparasites (Hyalomma Ticks) among camels.

TASK 1.2.1: IMPROVE LIVESTOCK FODDER PRODUCTION AND SUPPLY

FORAGE CROPS PRODUCTION, YIELD SAMPLING, AND SEED DISTRIBUTION:

SEED MULTIPLIERS

To increase the availability of fodder resources, L4G partnered with the Mopti Regional Agricultural Directorate (DRA) and the Koro Local Agriculture Service (SLA) to co-facilitate seed multiplication trainings for L4G clients, covering the topics of crop planting techniques, norms for seed crop production, and quality certification for cowpea, groundnut, sesame, and groundnut seeds. L4G examined producers' seed needs for forage production and seed multiplication. Some producers indicated they wanted to focus on forage production, while others wanted to concentrate on multiplication of seeds. At the June sensitization, seed multipliers were trained in methods for producing certified seeds for selling. Each producer also received a kit of seeds that included the groundnut variety, RRB, the cowpea variety, Bambara Nut, and the millet variety, Toroniou. The seed multipliers are expected to produce 101ha of seed crops.

L4G also connected its seed multipliers to Cereal Value Chain (CVC) POs, to whom they could sell legume and forage seeds. CVC groups have traditionally focused on millet and sorghum in Bankass and Koro, thus selling legume seeds to these groups is an expanded business opportunity for L4G clients. Senior L4G technical staff trained L4G staff and VAs on using micro dosages of fertilizer in fodder production. Over the course of the year, L4G trained more than 61 seed multipliers throughout the cercles of Koro and Bankass.

FORAGE PRODUCTION

L4G is using improved technologies, including seeds, to raise crop yields. Promoting double-purpose crops that are nutritious for both humans and animals strengthens food security in the region and increases the availability of forage for livestock fatteners. The fodder can be used for growers' personal livestock and excess can be sold for profit. L4G partnered with a retired agricultural extension agent, Mahamadou Maiga, to conduct yield sampling trials for improved legume forage crops with 10 rain-fed forage producers (including three women) in Koporona, Don, Goro, and Koumbogourou Villages in Koro Cercle. The yields achieved by L4G growers were 30% higher than traditional yields for Groundnuts (*Arachide*), 64% higher for Bambara Nuts (*Vouandzou*) and 112% higher for Cowpeas (*Niebe*) as seen in Table 2, below.

Table 2: Crop Sampling Results

Crop	L4G Grain Yield per Hectare (Kg / Ha)	Traditional Average Grain Yield per Hectare, Y2000-2009 (Kg / Ha)	L4G Hay Yield per Hectare (Kg / Ha)
Groundnut RRB	1127	867	4018
Bambara Nut	936	569	1387
Cowpea Variety K VX	733	345	760

SEED DISTRIBUTION

L4G intensified its crop and seed diversification initiatives throughout this year. Table 3 below indicates the amount of seed distributed in Bankass and Koro cercles by L4G.

Table 3: Seed Distribution in Bankass and Koro

COMMUNE	PRODUCERS	SEED TYPE	TOTAL DISTRIBUTED (KG)	HA PLANTED	EXPECTED YIELD
Bankass	24	Groundnut RRB RI	333	5.55	18
	133	Dolique	896	112	14
	13	Cowpea K VX G4	118	9.83	6
	25	Cowpea K VX RI	287	23.92	14
	13	Cowpea Sangaranka	890	74.17	10
	4	Cowpea Yèrèwolo	160	13.33	4
	47	Sepon 82 RI	4,450	370.83	2.50
	6	Sesame	37	3.70	0.80
	3	Sorgum Séguifa	400	33.33	7.5
	9	Bambara Groundnut	95	1.58	8
Total			7,666	648.24	84.8
Koro	10	Groundnut RRB	320	40	2
	41	Dolique	82	10.25	2.00
	20	Cowpea K VX	350	29.17	2.00
	36	Cowpea sangaraka	221	18.42	2.00
	4	Sesame	20	10	0.8
	20	Toroniou	300	30	2.5
Total			16,625	1434.32	180.9

In October, the L4G COP visited the Institute for Crop Research in the Semi-Arid Tropics (ICRISAT) experiment station in Samaya to view yield results for its dual-purpose millet and sorghum. Based on what he saw, the COP asked ICRISAT if they could provide Jacoumbe and Soumba sorghum varieties to Mopti region clients to sample since both varieties are short-cycle duration and maintain green leaves when the grain reaches maturity. L4G also introduced the ICRISAT-developed pigeon pea (*Cajanus cajan*) seed to growers and vendors to use as livestock feed, human food, and as a tool for soil erosion control. ICRISAT East Africa and ICRISAT Niger have developed short-duration varieties (production in 90-95 days) allowing for this variety to be grown as a rain-fed crop without fencing. The long-duration pigeon pea types survive up to five years, but need fencing to prevent livestock from devouring its palatable and nutritious leaves. For human consumption, pigeon pea seeds can be eaten like green peas or dried for future preparation like a cooked bean. Pigeon pea can be consumed as a complementary protein to millet, rice, or sorghum. Unfamiliar with the pigeon pea seed, producers were hesitant to take a chance, so the seed will be shared with the new intervention area and conserved for 2017.

To increase forage availability, L4G provided 16 kg of Dolique seed to the Cereal Value Chain (CVC) Program to enable them to test forage production at three sites: Konna (near Sévaré), Mopti and Djenne. Dolique is a drought-resistant, dual-purpose crop that can be planted at the end of the rainy season and harvested when other legumes and fodder are scarce, allowing producers to command a high price for the plant. Supplying Dolique seeds to CVC is congruent with L4G's partner strategy to reinforce millet and sorghum straw crops with legume crops for improved livestock nutrition. L4G continues to collaborate with CVC on their forage production results.

FORAGE AS A BUSINESS STRATEGY

L4G commissioned a Forage Market Study in November 2015. After receiving the initial study results, L4G expanded the scope of the study to provide more information on the commercial development of forage, expand its availability and create new businesses. In the rainy season, L4G conducted a complementary Forage Market Study under the technical guidance of Florent Mercier, AECOM Forage Specialist and partnered with a Malian firm, ADG Consulting, to perform the field work in August 2016. The final report is due at the end of October 2016. The results from this study will be used to strengthen L4G's "forage as a business" strategy.

An important aspect of the Forage Market Study's approach is its inclusiveness. Most contracted studies focus on results for men or are gender and age neutral. L4G insisted that ADG disaggregate data by sex and by age so the study results and recommendations could address the needs and opportunities for women, youth and teenage girls, and for men producers. The ADG study notes that with some support and better access to land, there are good opportunities for women, teenage girls and youth as players in forage production, transformation, and sales.

A preliminary finding that underlines L4G's focus on expanding animal fodder production is that there is a deficit or gap between the projected demand for and supply of fodder in both Bankass and Koro cercles. Using Tropical Livestock Units (TLUs)¹ as a standard measure of the demand for fodder, the study documents that the supply of dry matter available is 129,180 tons for 776,540 TLUs in the cercle of Bankass and 118,400 tons for 372,950 TLUs in the Koro cercle. In Bankass cercle, there is a demand of 727,069 tons of fodder, meaning only 18% of fodder needs are being met, which corresponds to 27 days of TLU feed. In the Koro area, the demand for fodder is estimated at 349,641 tons, which corresponds with a coverage rate of only 34% or 51 days of TLU feed. Thus, the preliminary conclusion of the report is that

¹ ILRI (International Livestock Research Institute) defines a Tropical Livestock Unit (TLU) as a live-weight animal of 250 kgs; a steer is usually one (1.0) TLU, whereas sheep and goats tend to be less, usually about .60 and .30 TLUs, respectively, in terms of their demand for pasture, forage and water resources. See www.ilri.org

with the limited agricultural land available, developing dual-purpose fodder crops is a sound strategy to meet the nutritional needs of livestock in Bankass and Koro. Improving the production and productivity of these fodder crops will allow producers to generate a surplus sufficient to be marketed to other livestock owners, earning the household an income while meeting household nutritional needs. A Tropical Livestock Unit is a livestock grazing comparison unit used for assessing the overall effect on grazing land of different types of animals (or of mixtures of animals), expressed either as a total for a whole field or farm, or as units per hectare (ha) or acre.

INTRODUCTION OF DOLIQUE AS A RECESSION AGRICULTURE OR IRRIGATED CROP

Dolique is a drought-resistant, dual-purpose crop that can be planted at the end of the rainy season and harvested when other legumes and fodder are scarce in the Lean Season, allowing producers to command a high price for the plant. The legume is successfully produced and marketed on a wide scale in the Tahoua Region of Niger, where it can generate revenues more than \$1,000 per hectare, providing food for human consumption and forage for animal feeding. Dolique is planted on clay soil at a seeding rate of 10 to 12 kg per hectare in the irrigated cool season or as a recession agriculture crop.

Not familiar with Dolique, local growers are hesitant to adopt new crops that have not been a part of local culinary or fodder production culture. Additionally, high productivity results cannot be guaranteed in the first years of production because it takes one or two years for growers to become well-versed in Dolique production. Nonetheless, promoting the crop is an important L4G initiative because the timing of its harvesting makes it profitable.

In October 2015, the COP and DCOP led a L4G staff training on the benefits of producing Dolique. Following the training, two L4G *Cercle* Coordinators sensitized growers on this new crop and distributed seed and NPK fertilizer. L4G partnered with the Mayor of Kani-Bonzon Commune to lead a Dolique production training in several villages and recruited 42 PO representatives (including five women). (See Table 4, below, for the number of producers reached, seeds and fertilizer distributed and hectares to be planted with anticipated sales results.)

Six Dolique demonstration plots totaling nine hectares were established in the new intervention areas and simple protective fences costing only \$40 were erected. The demonstration plots are managed by L4G Field Agents and Coordinators, and analysis on consumption and sales of seeds and forage will be completed by May 2017. In Bankass and Koro *Cercles*, Dolique was distributed in FY2016, and in FY2017 crop yield and sales results will become available after the Lean Season. Over the course of the next nine months L4G plans to track growers' progress, identify the most productive growers, and offer site visits to these fields to demonstrate best practices for other growers.

Table 4: Distribution of Dolique seeds and NPK fertilizer to producers

Location	Producers			Dolique Seed Distribution	NPK Fertilizer Distribution	Hectares to be Planted	Anticipated Sales (\$300/ha)
	M	F	Total				
Bankass	175	29	204	2,057.50	50	257.19	\$ 77,156
Koro	56	5	61	152.00	50	19.00	\$ 5,700
Mopti	5	0	5	28.00	0	3.50	\$ 1,050
Bandiagara	3	0	3	6.50	0	0.81	\$ 244

Djenne	2	7	9	8.00	0	1.00	\$ 300
Total	241	41	282	2,252.00	100	281.50	\$ 84,450

In addition to distributing Dolique seed and NPK fertilizer, L4G distributed a variety of seeds to growers in Bankass and Koro *cercles*. Dolique, groundnuts, Bambara groundnuts, cowpeas and sesame seeds were among the other crop seeds which L4G distributed via Producer Organizations (POs) in Bankass and Koro. (See Table 5, below, for a complete list of the number of POs and types of seeds which each PO received for planting.)

Table 5: FY 2016 Seed and Fertilizer Distribution to Producer Organizations in Bankass and Koro

COMMUNE	PRODUCER ORGANIZATIONS (POs)	SEED TYPE	TOTAL DISTRIBUTED (KG)	HA PLANTED	EXPECTED YIELD (Metric Ton)
Bankass	19 POs	Arachide RRB G4	600	10.00	6.00
	19 POs	Arachide Tikaba	600	10.00	6.00
	7 PO, 1 IFM	Dolique	1,112	139.00	6.00
	3 POs	Niébé K VX G4	30	2.50	2.00
	1 POs	Niébé Yèrèwolo	50	4.17	2.00
	14 POs	Sésame	156	14.27	5.60
	16 POs	Voandzou	1,694	28.23	6.00
Total	79 OPs		4,242	208.17	33.6
Koro	16 POs	Arachide Fleur II	789	98.63	2.00
	5 POs	Arachide RRB	279	34.88	2.00
	3 POs	Arachide Tikaba	220	27.50	2.00
	2 POs	Dolique	7	0.875	2.00
	4 POs	Niébé K VX	120	10.00	2.00
	35 POs	Niebe sangaraka	1168	97.33	2.00
	4 POs	Niebe Yèrèwolo	312	26.00	2.00
	2 POs	Sesame	41	20.5	0.8
	10 POs	Toroniou	873	87.3	2.5
	9 POs	Voandzou	940	15.67	2.00
Total	90 POs		13,233	835.025	86.5

FORRAGE CHOPPERS

Farmers will tell you that crop production results in plant waste—nearly 80 percent of the plant is leftover after harvesting. This plant waste is filled with nutrients that, if harnessed, can provide valuable nutrition to livestock. L4G collaborated with ICRISAT on the manufacture and use of mechanized forage chopping machines to be able to take the post-harvest plant waste and turn it into forage to enhance L4G's animal fattening initiative. Through a jointly developed business plan with the manufacturer, it was determined that a machine would cost USD \$1,090 to build locally. It is powered with a Chinese-made 5.7Hp/2600rpm diesel engine.

With an interest in introducing new technology to its clients, L4G subsidized four forage choppers for four POs in Koro and Bankass cercles. L4G agreed to pay for the full cost of a forage chopper if the PO agreed to, separately, invest 300,000 FCFA (or half of the cost of a forage chopper) into a bank account for future entrepreneurial initiatives the PO might choose to undertake. POs also agreed to allow for peer exchanges where other POs could come observe how forage choppers work. The return on investment of a forage chopper is generally realized over a period greater than one to two years, thus six to 12 month loans from MFIs and banks for forage choppers are not generally feasible for most pastoralists.

In January 2016 L4G received its first forage chopper, which was immediately incorporated into L4G's planned trainings. In February, a second prototype was created with two forage feeder trays that reduced chopping time by 50 percent. L4G tested the mechanized choppers for reliability and durability of the motor and chopper mechanism, fineness of chopping, chopping speed, fuel consumption, and ease of transport. Preliminary tests completed prior to distributing machines to POs indicated that production of shredded stalks, with proper maintenance of the machines, can produce more than 10 oxcarts of chopped forage per day.



MEMBERS OF THE WOMEN'S COOPERATIVE OF DIMBAL (DIMBAL COMMUNE) BANKASS CERCLE HARVEST COWPEA FORAGE IN PREPARATION FOR THE UPCOMING "LEAN SEASON".

Two of the four forage choppers L4G subsidized were distributed to POs in February. The remaining two were delivered at the end of April in the middle of the dry season. Because the peak harvesting season is November to February, the data L4G could collect on production capacity and potential earnings is not conclusive, but nonetheless informative of the income potential for POs that can procure forage choppers. (See Table 6, below.)

Table 6: Four Village Forage Chopper Results for April-May 2016

Cercle	Village	PO Beneficiary	L4G paid per chopper (FCFA)	Amount PO obliged to deposit in savings	Kg. chopped 24 Apr - 21 May*	Profit earned (FCFA)	FY17 Harvest Estimate Profit/mo. based on 300kg/mo. (FCFA)
Koro	Don	Minsougou	600,000	300,000	1,100	39,500	10,333,333
Koro	Pel	Edjuko	600,000	300,000	200*	9,500 *	10,333,333
Koro	Wilwal	Salif Togo (AE)	600,000	300,000	N/A	N/A	10,333,333
Bankass	Koulogo	Amakéné	600,000	300,000	1,600	53,500	10,333,333
Total			2,400,000	1,200,000	2,900	102,500	41,333,333

NB: The results observed from April to May were during peak of dry season with limited post-harvest chopping prospects. The results of the machine in Pel village are considered outlier values because the machine was out of service for much of this period.

POs will charge farmers and fatteners approximately 44 FCFA per kilogram of chopped harvest debris, but this value will be refined over the course of the FY2017 harvest season. Further analyses are will be conducted this harvest season to further determine utility, ease of use, and profit potential of forage choppers. L4G will continue to promote the forage choppers and link POs that desire to purchase a machine with the forage chopper manufacturer.

ANIMAL FATTENING

Animal fattening is the process of feeding livestock a strategic diet to increase their body mass so they command a higher price at market, where they will be purchased for slaughter. Traditionally, animal fatteners can purchase, fatten, and sell animals, (one animal fattening cycle), once or twice per year. They purchase animals and rely on traditional grazing to increase animal mass, but during the Lean Season productivity diminishes significantly. The improved methods for animal fattening that L4G promotes effectively increases the number of annual animal fattening cycles possible from one or two, to three or four. Additionally, the L4G-partnered fatteners are selling livestock that have greater mass than animals fattened by traditional means. This means that not only is revenue increased by the additional animal fattening cycles possible in a year, but the price for livestock is also higher relative to animals that are not fattened using enhanced methods.

IMPROVED ANIMAL FATTENING TECHNIQUES COMMUNITY SENSITIZATION

Farmers, producers, and herders are hesitant to take risks on technologies that could lead to unmarketable goods, services, and animals, which would bring unbearable losses. L4G promotes proven methods for animal fattening that increases the number of times herders can procure, fatten, and sell animals in a year. In FY2016 L4G continued its initiative to sensitize herders on improved animal fattening techniques, training 80 VAs and AEs to foster greater interest within the POs in their communities. New POs partnered with L4G and began taking advantage of the resources and technologies to improve the livestock value chain.

TRAINING AND SUPPORT ON ANIMAL FATTENING

L4G organized several training sessions for POs in new communes on three topics that contribute to animal fattening: techniques for enriching hay and straw with urea; fabrication of multi-nutritional lick blocks for livestock; and forage management. Training sessions with POs in new communes in Koro and Bankass *Cercles* built the capacity of PO leaders in animal nutrition and in livestock as a business. These trainings are particularly valuable to vulnerable households who can increase net income by reducing the purchase of expensive livestock feed; improving livestock product quality; reducing herd losses due to malnutrition; and increase income through selling multi-nutritional salt licks and urea-enriched fodder. L4G provided cascade training to 335 producers (including 324 women) in Bankass *Cercle*. L4G continues to build off its previous interventions in increasing community awareness on improved animal fattening techniques.

IMPROVED FEEDING METHODS

L4G has partnered with Livestock Nutrition Specialist Dr. Hamidou Nantoumé at the Sotuba Rural Economy Institute (IER) on livestock feed rations and observe and test the IER's NIRS Diagnostic Analysis Machine. The NIRS (Near Infrared Reflectance Spectroscopy) uses prediction equations that allow instant and accurate reading of the feed value for crops, feeds, and feed rations so that livestock nutritionists and technicians can accurately evaluate or develop rations for animal fattening. L4G will continue to work with IER on determining best ration sizes for animal fattening and integrating the recommendations into program interventions.

LIVESTOCK WORKING GROUP LAUNCH

As suggested at the FY 2015 livestock value chain stakeholders' workshop, L4G launched the livestock working group on December 17, 2015, with 137 participants (including 22 women) to broaden the dialogue around and engagement in increasing the marketability and profitability of the livestock value chain. Participants included Prefects and Assistant Prefects, Commune Mayors, PO leaders, Directorate of Production and Animal Industry (DLPIA) representatives, private veterinarians, AEs, livestock producers and large-scale herders, village chiefs, local NGOs, and the Regional and Local Directorates of Veterinary Services. The group's recommendations and subsequent action taken are included in Table 7 on the following page.

Table 7: Livestock Working Group Recommendations and Action Taken

Recommendation	Action Taken
Fully involve village chiefs to mobilize herders to participate in the annual vaccination campaign	Local consultation frameworks focused on animal health were set up to mobilize actors. These framework groups include mayors, village leaders, and livestock associations
Stakeholders collaborate to ensure that the totality of livestock herds are vaccinated	Trainings were developed and given to producers and their associations on good animal health practices, including health plans for cattle.
Local NGOs should publicize and support the annual vaccination campaign	L4G has begun the process of reaching out to other NGOs operating in the intervention zone to seek their support, including PRAPS and Harande.
Increase public service announcements (radio messages, support from local village chiefs, etc.) to ensure adequate sensitization on the benefits of vaccination and deworming treatments	L4G has created sensitization messages for diffusion and is working with local radio stations, town criers, AEs, VAs, village leaders, and private veterinarians
Communes elaborate vaccine action plans	Community consultation and animal health action committees have been established to craft and monitor the implementation of vaccination plans. L4G is committed to reinforcing their capacity to proactively take needed action.
Increased advocacy with financial technical partners (MFIs and banks)	L4G made strong efforts in FY2016 to link its clients to financial institutions in view to help its clients secure funding to advance their entrepreneurial endeavors. But banks are risk averse and unable to offer particularly favorable financial services to L4G clients, so L4G must create a framework for dialogue between various stakeholders, including USAID, banks, MFIs, IESC, POs, and others.
Systematically monitor the progress of the annual vaccination campaign and ensure an adequate control of the tasks assigned to the Private Vets (SVPP)	Monitoring and evaluation has been planned with local dialogue groups, the DRSV, Cercle Coordinators, the Field Agents, and the OVM.
Continue to hold ongoing meetings among the members of the livestock working group (meet quarterly)	L4G has organized quarterly and annual meetings in November, January, April, and July.

I.3 IMPROVED PASTURELAND AND WATER RESOURCES MANAGEMENT

In FY2016, L4G focused on locating, assessing and mapping water resources and points for livestock purposes and meeting with water user groups to establish a priority action plan with a list of priority sites for critical water points («point d'eau agro-pastoral») intervention. In collaboration with the Mopti Regional Directorate for Production and Industry Animal (DRPIA), L4G conducted a workshop in April on livestock production for 63 participants (including 3 women) from Koro District that included the District Prefect, Assistant Prefects, Commune Mayors, traditional leaders, livestock fatteners, herders, buyers, the local radio, the Association of Professional Peasant Farmer Organizations (AOPP), and private veterinarians. This was a diagnostic workshop to identify ways to increase productivity, improve commercialization, increase investment in the livestock sector, and create jobs through actions to rehabilitate and improve management of livestock markets, pasture lands, water points, livestock passage corridors, and livestock vaccination parks. Participants identified priorities and developed action plans to address previously identified constraints. Additionally, the group identified and classified livestock water points for Central and Southwest Koro as a first step to the water points' improvement assessment.

Before undertaking any such works, L4G initiated a series of assessment to determine water point feasibility, cost, and determine the return on investment as well as compare with other options and technical solutions. AECOM's Water Specialist Pierre Roy led technical assessment. The first assessment was conducted in April 201- L4G partnered with INGO AKVO to conduct a water point assessment to identify, both existing and potential water points that needed renovation. L4G identified and mapped 17

water points in Koro Cercle with the help of Commune Mayors and local livestock value chain actors, who provided a list of 80 water points. The top priority is to rehabilitate water points at three key livestock markets in Koro and six in Bankass. The second priority is to rehabilitate or upgrade ponds or water sources located along livestock corridors that lead to key markets.

The assessment produced three recommendations:

1. Rehabilitate watering systems at existing livestock markets and, once rehabilitated, transfer their management to local producer organizations;
2. Rehabilitate water points where a transhumance path superimposes on a local commercial path;
3. Engage herders to adopt modern grazing area management techniques in good grazing areas where there is no livestock pond.

After the assessment, in conjunction with the DRPIA and the Regional Office of Water and Forests, L4G organized a planning workshop in May with the technical livestock management committees from Koro and Bankass *Cercles*. The purpose of the workshop was to discuss processes to rehabilitate livestock markets, delineate and improve pasture land management and livestock passage corridors, and build livestock cattle treatment chutes. Participants produced an action plan with completion dates and provisional budgets totaling 3,253,720,000 CFA (about \$5M). Please note, participants developed the budget but L4G conducted independent assessments. Given the communities need, L4G started discussions with the World Bank PRAPS Project to partner on these interventions in FY2017.

In August, Mr. Pierre Roy hosted L4G's stakeholders to discuss livestock infrastructure including water points, livestock markets, and vaccination parks. Bringing together mayors offices, livestock services professionals, and representatives from herders, cooperatives, and L4G, this workshop permitted participants to understand the steps L4G has identified for selecting and preparing priority sites for rehabilitation or construction in FY2017, including wells, forage parks, livestock markets, ponds, and vaccination parks. Within a week, Koro and Bankass participants created a list of nine livestock markets, (six in Bankass and three in Koro), where water points could be created or rehabilitated. L4G's infrastructure improvement plans have been included in the FY2017 Workplan. The sites identified are included in Table 8 on the following page.

Following the August stakeholders meeting, L4G conducted a geophysical study of underground water, using the vertical electrical sounding (VES) electrical resistivity methods, which was carried out to determine the subsurface layer parameters (resistivity, aquifer zone and thicknesses) and to reveal the nature of the aquifer in this area (confined or not), its thickness and, after all, the potential of this ground water aquifer. The assessment concluded in October 2016

Table 8: Livestock Market Water Point Rehabilitation

Cercle	Location	Dimensions (m ²)	Existing Water Point	Need	Expected Result
Bankass	Bankass	6,000	Intake (adduction)	To be confirmed	Evaluation of the coverage needs
Bankass	Diallasagou	3,250	External manual drilling pump at 30m	Water tower and pump	Existing drilling assessment for the installation of a photovoltaic system with a water tower.
Bankass	Dounde	6,000	None	Water point required	Geophysical survey
Bankass	Koulogon-Habe	3,000	None	Water point required	Geophysical survey
Bankass	Ouonkoro	2,025	None (pond at 200m)	Water point required	Geophysical survey
Bankass	Tori	TBD	None	Water point required	Geophysical survey
Koro	Koro	51,750	External manual drilling pump with water tower	Photovoltaic Pump	Existing drilling assessment for the installation of a photovoltaic system
Koro	Youdiou	1,102	Pond at 42m	Water point required	Geophysical survey
Koro	Koporo-Pen	1,250	External manual drilling pump at 300m	Water point required	Existing drilling assessment for the installation of a photovoltaic system with a water tower.

WATER POINT, PASTURE AREA, AND POND-DIGGING ACTIVITIES

Herders struggle, in the dry season to adequately nourish and provide water for their livestock. A critical component of strengthening the livestock value chain is improving access to water and pastureland. L4G has identified actions required to improve infrastructure for increasing the productivity of the livestock value chain:

1. Selection completed of priority ponds and wells to rehabilitate to maximize water availability for livestock. (See Table 9, below, and table 10 on the following page.)
2. Evaluate the land proposed for priority ponds and wells.
3. Verify the presence and structure of the management committees.
4. Visit the Regional Hydraulic Director to present the proposed rehabilitation sites and work plan, and obtain any existing and relevant data for these sites.
5. Prepare a topographic map of the ponds, calculate quantitative data, establish an acceptable budget range and prepare an RFQ.
6. Review offers for the topographic map and evaluate for technical and financial reasonability.
7. Create contract for the topographic map, begin implementation, and supervise the work.
8. Prepare the RFQ for developing and digging the ponds.
9. Review the offers for developing and digging the ponds and select a vendor.
10. Create a contract for developing and digging the ponds, and supervise the work.

Table 9: Pasture Areas – Pond (1) and Well Rehabilitation (3)

Site	Nature	Need	Expected Result
Bankass/Bare Dar el Salam	Pasture area with well	Rehabilitate well	Evaluate existing well
Bankass/Ouonkoro	Pasture area with pond	Deepen pond	Mapping required
Koro/Koro central (southern side)	Pasture area with well	Rehabilitate pasture	Evaluate existing well
Koro/Kaoussa	Pasture area with well	Rehabilitate pasture	Evaluate existing well

Table 10: Creation of New Ponds

Pond Location	Corridor	Current pond dimensions	Expected Result
Sogou-Yaguen/Amatogne Bouro	North	77m x 64m	Deepen
Ogodengou/Poulogoro or Tourou/Bourogara	North-West	50m x 43m ou 51m x 39m	Deepen
Bondo/Pesouen	Nord-East	132m x 119m	Deepen
Pel/Etékorro	Koro-Bankass	54m x 40m	Deepen
Toroli/Ardjéné Bouro	South	305m x 115m	Deepen

VACCINATION PARK ACTIVITIES

There is a lack of vaccination parks in Mopti, which move animals through an assembly line to quickly and safely vaccinate them when they otherwise might resist the vaccinator. Parks offer greater safety for herder and vaccinator, and greater efficiency in vaccinating hundreds of animals. The DRPIA, herders, and veterinarians made the following recommendations to L4G:

1. Create a list of existing vaccination parks and select 10 (4 in Koro and 6 in Bankass) for improvement.
2. Visit the DRPIA to present the sites of the study, the work plan, and obtain any techno-economic data or data surrounding Malian standards for vaccination parks.
3. Characterize existing infrastructure in the 10 vaccination parks and identify their needs, in accordance with the DRPIA standards (land finances, management, etc.)
4. Prepare the RFQ for the rehabilitation of the 10 vaccination parks, review offers, and sign a contract for park rehabilitation.
5. Prepare the RFQ for the construction of new vaccination parks, review offers, and sign a contract for the construction of the vaccination parks and the management/supervision of the work.

In FY2017, L4G will evaluate vaccination parks and determine which to provide infrastructure rehabilitation to improve the conditions of livestock watering, feeding, and health as well as heard productivity and the conductions surrounding market access in the affected communes.

I.4 IMPROVED COMMUNITY LITERACY AND NUMERACY

NUTRITION

THE MORINGA TREE

L4G formally introduced the Moringa tree in FY2016 as a dual-purpose crop. The Moringa tree's stalks can be used as fodder for livestock and its leaves can be added to meals to enhance household nutrition, contributing to L4G's indicator on improved household nutritional practices. L4G activities included raising awareness on the value of Moringa as a dual-purpose crop, expanding production, and providing demonstrations on integrating Moringa in the daily diet. Moringa, known in some parts of West Africa as the Miracle Tree, is a source of valuable vitamins (especially vitamin C) and minerals, and it even contains protein.



Telly School Garden

The L4G Nutrition Specialist sensitized eight schools in Koro and Bankass on Moringa as a dual-purpose fodder crop, and it gave 501 seedlings to be planted in the school gardens. Additionally, L4G provided sensitizations to 14 female VAs and 49 PO members from Dimbal and Kani Bonzon. The VAs in turn provided cascade trainings on cooking with Moringa to 195 of their peers. And tree nursery workers in Ende and Telly received training to reinforce best practices for Moringa seed germination and nursery maintenance. L4G conducted surveys of its partner POs in 12 villages in Bankass and Koro cercles and found that of 10,710 Moringa seedlings available in FY2016, 2,299 had died; 3,668 had been planted for forage, human consumption, and seed multiplication; 1,541 plants were sold; and another 3,202 were available for sale.



HANDS-ON TRAINING ON MORINGA BASED RECIPES AND DEMONSTRATION IN BANKASS, 7 APRIL.

SURVEY ON CONSUMPTION OF MEAT AND ANIMAL PRODUCTS

L4G conducted a study in August and September on local consumption of meat and animal products, such as milk and yogurts. The purpose of the study was to understand the dietary habits of the people living in the L4G zone and develop behavior change strategies to promote improved nutritional practices. The study is related to the program's implementation of nutrition activities according to IR I, (Task I.4.2), and is meant to guide L4G's nutritional intervention strategy.

The L4G Nutrition and M&E Specialists developed the questionnaire and trained field staff and other surveyors in August on how to accurately carry out the survey, which is conducted the surveyor's smartphone. Teams surveyed nearly 420 households in Mopti, Djenné, Bandiagara, Bankass, and Koro cercles. They are in the process of analyzing the data, which will be completed in early FY2017.

LITERACY

LIVESTOCK AS A BUSINESS

In January, L4G finalized the French versions of the L4G Livestock as a Business (LAB) Manuals and began providing LAB training on developing simple business plans, value-added livestock marketing (calculations of added margins further along a supply chain), and participatory training methods for working with L4G clients. The LAB Training also stresses the need to demonstrate profit generation.

In March, 54 VAs and AEs (20 women) participated in LAB training in Koro and Bankass Cercles. This Training of Trainers (TOT) event built VAs and AEs' understanding of livestock husbandry as a profitable business and their knowledge of profit-loss calculations. VAs and AEs are now responsible for conducting multiplier trainings at the village level with their PO members, emphasizing all possible production costs, maintaining cost registers, and using a hand calculator to precisely calculate gross margin. During the year, VAs conducted cascade trainings to 568 L4G producers (393 women) in Koro and Bankass Cercles on business and entrepreneurship.



L4G STAFF TRAINING IN BUSINESS PLANNING, VALUE-ADDED LIVESTOCK MARKETING – JAN. 2016 IN SÉVARE.

DOUBLE-ENTRY ACCOUNTING REGISTERS (DEAR)

In November, L4G conducted a Double-Entry Accounting Registers (DEAR) training in Bankass for 34 PO members (including 19 women) and livestock business groups leaders in Koro and Bankass. The internationally accepted double entry system of accounting or bookkeeping means that every business transaction will involve two accounts or more, which often is described as the equation: assets = liabilities + owner's equity. Thirty producers (including 20 women) from Koro and Bankass benefited from multiplier training carried out by the first group who received the DEAR training. POs are now using the DEAR registers to control the flow of money into and out of their groups. (Note: DEAR accounting practices refers to the need to have two separate accounts, one being an account of the debts owed to the PO and the second being credits that the PO owes to its members.)

Following the DEAR training, in December, 84 members of the WLBP from Koro and Bankass participated in training for value-added livestock marketing planning and calculations at the Institute for Professional Training (IFP) in Bankass. This training enhances women's business math skills. More importantly they are now able to: 1) envision and plan for group transport and marketing of livestock, and 2) calculate additional marketing margins from sales of livestock beyond a simple local market sale.

COMPONENT 2: INCREASED DOMESTIC AND EXPORT TRADE

2.1 STRENGTHENED MARKET ACCESS AND LINKAGES (QR-1)

- Task 2.1.1 Improve vertical linkages to build trust and sustainable market relationships
- Task 2.1.2 Strengthen horizontal linkages to achieve economies of scale.
- Task 2.1.3 Improve producer capacity to identify and achieve market requirements.
- Task 2.1.4 Link and improved access to financial services

TASK 2.1.1 IMPROVE VERTICAL LINKAGES TO BUILD TRUST AND SUSTAINABLE MARKET

L4G made a critical pivot in its strategy in late FY 2016. As a result of a short-term technical assistance assignment by AECOM's consultant, Dr. Thomas J. Herlehy, L4G has brought demand-driven, market-oriented activities to the forefront of all program activities and integrated all strategies and approaches accordingly. Based on a series of workshops which Dr. Herlehy facilitated and led in Bamako in June and August 2016, L4G program staff now have a clearer understanding of the dynamics of national and international livestock markets and the importance of integrating other training and technical assistance components of the program into a market-oriented approach. Indeed, based on Dr. Herlehy's recommendation, L4G staff have drafted a Directory of key active stakeholders in the livestock value chain, including animal fatteners, traders, buyers, wholesale aggregators and exporters. This is a living document in that L4G proposes to constantly be up-dating the list of contacts, their contact points and adding commentary about whether they are reputable and trust-worthy partners with whom L4G program participants can work. The Directory will facilitate the establishment of vertical linkages between the stakeholders (herders, fatteners, traders, exporters, inputs providers, services providers) working at different segments along the livestock value chain.

To facilitate improved producer's access to relevant input, in October 2015, L4G met with Bunafama Feed Ration Factory Director, Mr. Abdramane Fofana, to discuss options for Bankass and Koro POs to purchase bulk rations of livestock feed. Bunafama expressed a commitment to direct delivery to animal fatteners in the project zone without charging the shipping costs, provided there is a 40-ton minimum

order and on-delivery payment. The option of working with Bunafama is still on the table, and L4G staff is pursuing this option in discussions with the POs. Concomitantly, L4G's livestock feed production strategy also promotes and trains forage producers and animal fatteners to independently learn the skills to produce and properly store most of the feed that they may need for their herds.

Fattener network members are consolidating their buying intention to pressed cake with special and guaranteed prices. L4G support to link herders and fatteners with input and services providers encompass other inputs like veterinary products and services, and financial services, which are analyzed in other sections of this report.

TASK 2.1.2 STRENGTHEN HORIZONTAL LINKAGES TO ACHIEVE ECONOMIES OF SCALE

To strengthen horizontal coordination and linkages, L4G accompanied fattener POs in Koro and Bankass *Cercles* to create Fatteners Network. Two Networks are operational in Koro and Bankass, L4G provided training and assistance to help develop their internal bylaws and code of conduct, write simple profit and loss statements for animal fattening, learn improved practices of animal fattening, and apply for needed loans. Both networks work with L4G to increase the competitiveness of their members in livestock activity as business. For instance, they participated in the trips to Senegal and Guinea aiming at facilitating sheep export from Mali and reducing non-tariff barriers to livestock trade. Business contacts and linkages were established with these networks and Senegalese and Guinean buyers for Tabaski sheep sales. After the Senegalese importer decided not to come purchase the sheep ordered for Tabaski Festival, the fattener network took the initiative to take the 478 heads of sheep that had been brought to Koro and export them to Abidjan and Lomé

In the new extension zones, the project is providing support and assistance to the creation of networks of economic stakeholders working in livestock fattening.

TASK 2.1.3 IMPROVE PRODUCER CAPACITY TO IDENTIFY AND ACHIEVE MARKET REQUIREMENTS

MARKET INFORMATION

To operationalize the Livestock Market Information System (LMIS), L4G met with the municipal leaders and livestock market management committee members in Bankass and Koro so that L4G could understand the current data collection procedures and forms that feed into the national LMIS. L4G noticed that some of the forms were not completed correctly. L4G subsequently trained 15 enumerators who now collect information on the price of cattle, sheep, goats, and livestock fodder in Bamako and Kati Markets and in 8 other livestock markets in Bankass and Koro *Cercles*.

L4Gs's Bankass and Koro offices are disseminating the data through available channels, such as radio, billboards, and at fattener meetings. The purpose is to inform stakeholders in the value chain of market trends, so that they better understand the dynamics of livestock markets for decision-making.

Based on the recommendations contained in AECOM's L4G consultant report by Dr. Thomas J. Herlehy, L4G initiated meetings with the International Livestock Research Institute (ILRI) and the West Africa Trade Hub to harmonize national and regional LMIS efforts. Based on those discussions with ILRI and the WATH, L4G is changing its approach and strategy for its LMIS activities for FY2017, as reflected in the 3rd Annual Workplan covering FY 2017. (See the separate document submitted to USAID.) The purpose of the revised data collection is to inform stakeholders, especially livestock owners and traders, about recent market trends so that they better understand the dynamics of livestock markets for

decision-making about when and where to sell their livestock, whether in national or regional (export) markets.

MARKET ANALYSIS

During the reporting period, L4G hosted meetings with the *Association pour la Promotion de l'Élevage au Sahel et en Savane* (Association for Livestock Promotion in the Sahel and Savannah or APESS), which is a regional grassroots institution representing Peuhl herders and has a presence in all L4G work zones. APESS is heavily engaged in animal fattening and water resource management activities, especially in Fatoma market, north of Sevaré.

L4G visited Fatoma Market in May and June to observe its management, offtake rate, market destinations, and infrastructure maintenance. Staff noted problems with market management and water supply to humans and cattle, including a diesel water pump that was in disrepair, and other constraints. There is a provisional market management committee with 15 members, including the local cooperative, the Fatoma Commune Village Chief, and a youth organization. L4G will work with the committee to improve market management, including capacity building for market managers.

L4G met with the Mayor of Fatoma Commune, who is responsible for the management of Fatoma Market. He expressed reservations, noting that his Commune receives only 150,000 FCFA per month, while sales at the market sometimes peak at 1,500,000 cattle per week. The market fee established at 150 FCFA per head sold in the market is not fully collected, so revenues received are not sufficient for maintenance and upkeep. The Mayor's Office has recently put in place a temporary management committee (a co-management unit) to improve fee collection and ask L4G to support the leverage of management capacities of the Committee, for instance through training sessions and management tools. The mayor expressed interest in L4G providing support and improving the market's management. L4G's next steps include engaging all stakeholders to assess market management problems, which will culminate in an action plan to improve market management, and improve market information data collection.

TASK 2.1.4 LINK AND IMPROVED ACCESS TO FINANCIAL SERVICES

Lack access to finance is one major entry barriers in the livestock value chain. Without a credit component or guaranty included in the project activities, L4G works with other partners to link livestock economic actors with financial institutions (commercial Bank and FMI). Over the past year, L4G activities focused on specifying procedures for credit access at area financial institutions, determining creditworthiness of POs, and strengthening linkages between the financial institutions and L4G clients. L4G strengthened its collaboration with USAID the International Executive Service Corps (IESC), which provides technical assistance for the Development Credit Authority (DCA) partners in Mali, including the Bank of Africa (BOA) branch office in Mopti.

PERFORMANCE ASSESSMENT OF PO GROUPS AND INDIVIDUAL ENTREPRENEURS

L4G field staff worked with several microfinance institutions (MFI) and banks in Koro and Bankass, including *Banque Malienne de Solidarité* (BMS), Guinedou, Kondo-Jigima, *Première Agence de Micro-finance* (PAMF), and Bank of Africa to help L4G clients obtain loans with guarantees at reasonable interest rates.

L4G led a training on October 2015 for 140 PO leaders with Guinédo, Kondo Djigima, PAMF, BOA, and the US Africa Development Foundation on the guidelines and rules of engagement for PO members to access credit for animal fattening and other value chain related credit for livestock and forage production and marketing. Because of this training, 210 producers from 13 POs (Bankass Cercle) confirmed their credit needs for animal fattening at a value of \$51,908.



SOME OF THE 210 PARTICIPANTS AT THE L4G MFI TRAINING ON OCTOBER 7, 2015.

In May, in collaboration with IESC, L4G developed creditworthiness evaluation criteria and subsequently assessed the creditworthiness of PO groups and individual livestock value chain entrepreneurs. L4G Staff evaluated 68 groups. Of the 35 pre-selected POs evaluated in Koro Cercle, 11 were judged as very creditworthy and 24 as bankable. None were deemed ineligible for credit. Of the 33 pre-selected POs evaluated in Bankass Cercle, 7 were judged as very creditworthy, 25 as bankable, and 1 as ineligible. L4G presented these results to the BOA in Bamako on 8 June, in collaboration with IESC and USAID-Mali. The L4G/IESC presentation provided BOA pertinent information to help the bank decide on providing credit to new clients, namely actors associated with the livestock meat value chain. Following the presentation, the next step is for BOA to present the L4G credit proposal to its risk management committee for evaluation. The bank will then come back with a decision on whether the L4G clients will be allowed to obtain a loan based on the DCA agreement. Unfortunately, neither L4G nor IESC have received any feedback from BOA, despite several attempts by IESC to call and write to BOA.

L4G intends to help these pre-selected POs obtain loans from banks and MFIs. L4G will help the POs present to the financial institutions credible profit and loss statements and cash flows for sheep fattening and livestock value-added marketing. Development of the PO and individual bankability evaluation tools helps L4G, IESC, and our banking partners determine the high performing POs considered reliable to take loans, share risk, and pay back loans.

PAMF is processing eight credit applications from women's POs for livestock fattening. PAMF said the applications are in the approval and disbursement phase. Kondo-Jigima, BMS, and BOA said they had received credit applications but had not yet processed them. Further negotiations with the banks and MFIs will focus primarily on Tabaski sheep fattening and Tabaski value-added marketing for FY 2016. L4G will include individual transporters and traders in its bankability assessment.

BOA PROCEDURES FOR CREDIT ACCESS

In the first quarter, senior L4G managers met with the Mopti BOA Branch Director and Assistant Manager to discuss increased credit access for L4G clients. The BOA had concerns about lending to small holders in the agro-livestock sector due to historically high loan default rates. BOA also expressed its intention to lend to individuals exclusively, which is problematic for POs because their members work collectively. Additionally, the BOA required 50 percent guarantee for its loans which is a difficult

for POs to collect individually. L4G and IESC developed a proposal to BOA to help educate them on the livestock sector (in terms of collective production), present statistics on top performing L4G clients' creditworthiness (through an exhaustive evaluation of L4G client groups and individual livestock value chain actors), and provided additional options for BOA to increase support through wholesale loans to MFIs, who in turn can lend to small holder farmers, and presented alternative solutions to the BOA for reducing the 50 percent guarantee requirement. At the end of the fiscal year, the BOA has not responded to L4G's proposal.

MICROFINANCE INSTITUTIONS

L4G organized meetings with bank and MFIs, based on the results of the performance analysis of potential credit recipients. The L4G visited BMS, Guinedou, Kondo Jigima, and PAMF to discuss the possibility of cooperation to provide greater access to financing to POs that are led by women and youth. Through these exchanges, L4G learned the loan acquisition conditions of each institution, and found that each organization is ready to support L4G clients. These meetings permitted the consolidation of general conditions for access to loans. For instance:

Kondo and Guinedou:

- Joint and several guarantees (each guarantor is both jointly liable (as a member of the group) and individually liable (on its own separately), to the lender for the repayment in full of a borrower's indebtedness);
- Government-issued identification for each member;
- Completion of the credit application form at the Kondo branch;
- Processing fees from 2,000 – 5,000 CFA;
- Monitoring and management fees (3% of the non-reimbursable amount);
- 10% down payment to guarantee funds (reimbursable);
- Interest rate: 18%

BMS:

- Completion of the credit application form;
- Deposit – may use home as collateral, or a 10% down payment;
- Photo identification of three representatives of the organization;
- 9-12% interest rate

PAMF

- Establish groups of 15 people and provide identify cards or NINA;
- Choose three account signatories and each should have an identity card or NINA card and three ID photos;
- Deposit 1,000 CFA;
- The PAMF agent is responsible for creating the credit files after opening the account

L4G provided technical assistance, training and support to fatteners and producers in opening bank accounts, completing credit applications and preparing business plan. L4G will continue to collaborate with IESC for review of credit applications and business plans before submission. According to data collected for the indicators on loans, the credits used by L4G clients represent 108,447,800 FCFA (\$216,896), about 108% of the FY2016 target. These loans are provided by MFIs (about 34%) and by the

POs as internal loans (66% of the amount). In Koro and Bankass, L4G clients do not benefit loans from the Banks in Mopti Region (including those involved in DCA arrangements aiming at easing credit access for entrepreneurs). However, access to credit remains a major entry barrier for livestock value chain actors or emerging micro, small and medium scale fattening entrepreneurs or units.

The available results related to access to loans indicate a lower amount of loans from financial institutions, according to the data collected for the Annual Report. The internal loans provided by the PO respond partly to member credit needs. In some cases, the partnership initiative undertaken by L4G may have caused the opposite results. In Koro for instance, some fattening POs who received loans in the past from PAMF, one of the MFI which covers the major L4G communes, did not receive a loan for this campaign. According to PAMF field Agent, the institution asked to hold the request received from POs who are L4G clients, until favorable conclusions from the ongoing linkage initiative, conducted by IESC under L4G recommendation. This decision was taken to explore the possibilities for PAMF to get from BOA wholesale loans or guarantee to increase the loans to L4G clients. L4G is working to resolve this situation.

2.2 DECREASED BARRIERS TO TRADE

L4G conducted a study on livestock trade barriers to highlight the impacts of non-tariff costs on livestock trade and on the competitiveness of livestock value chain entrepreneurs. Activities supported by the project are aligned with the study recommendations and findings and with the L4G expected results related to a favorable business environment for Livestock value chain stakeholders.

TASK 2.2.1 LINK LIVESTOCK SECTOR STAKEHOLDERS TO THE REGIONAL TRADE POLICY DIALOGUE

During this period, L4G conducted a study on trade barriers in the livestock sector that was led by short term consultant with the purpose of better understand trade barriers both within Mali and for sub-regional livestock exports. The study revealed the abundance of check points (that cause delays among the transportation routes) and check points' "rent seeking" (a practice aimed to extort payments from transporters and livestock traders) as the greatest constraints threatening free trade. L4G continued to support national representative organizations in their efforts to reduce non-tariff barriers to trade, and to smooth transport of livestock to coastal cities for major marketing events. L4G encouraged and facilitated meetings and events aiming to reduce barriers to trade, for instance through participation of livestock groups in policy dialogue at the regional or cross-border level, and by improving transport services.

L4G met with the National Association of Meat Producers, Traders, and Processors (FEBEVIM), to discuss strengthening working relationships to improve internal management capacity and to promote livestock exports and internal marketing within Mali. During these meetings, FEBEVIM reported that Senegal requires 750,000 sheep for Tabaski, Cote d'Ivoire 500,000 sheep, and Guinea 500,000 sheep. Understanding livestock consumer needs ahead of Tabaski will allow L4G producers to bring the appropriate number of livestock to the market, and avoid a high supply of livestock remaining in Mali following the festival.

During the 2015 Tabaski festivities, many vehicles transporting sheep from Mali to Senegal were blocked at the border crossing in Kayes. Malian exporters were unable to provide Senegalese importers with the sheep they needed, resulting in a loss of trade and an excess supply of sheep in Mali. L4G, ILRI and USAID-Mali held several meetings with FEBEVIM to organize a trip to Senegal to meet Senegalese stakeholders and explore the possibility of exporting Malian sheep for 2016 Tabaski. Additionally, the

Guinean Ambassador to Mali attended a meeting with FEBEVIM, L4G, and the USAID COR, to discuss the potential for exporting cattle and sheep to Guinea. The Ambassador pledged his full support to ensure transparent livestock trade with his country.

To facilitate and increase livestock sales at domestic and export market, L4G supported, in partnership with ILRI, FEBEVIM two trips to Senegal (from July 17 to 23) and Guinea (from August 6 to 12). This is a support to FEBEVIM focused essentially on 2016 Tabaski sales.

For the Senegalese market, the delegation met and discussed with economic actors and authorities on consumer needs and preferences/attributes for major Cities (Dakar, Thiès, Kaolack, Fatick). At the end of the local meetings, a roundtable was organized where the Senegalese Livestock Minister discussed purchasing measures established by the GOS to facilitate sheep sales from Mali, including the reduction of all barriers that can impact the transport and the Tabaski sales. In addition, Senegalese authorities organized a trip in Bamako during the first week of August to discuss with Malian authorities for remove any barriers to the 2016 Tabaski operation. L4G distributed contacts of sheep buyers and suppliers to facilitate and increase Tabaski sales.

Following this delegation, the Senegalese Minister of Livestock participated in her annual visit to Mali to discuss Tabaski. The Minister hosted a meeting at the Senegalese Embassy for Malian and Senegalese producers, traders, exporters, and partners. L4G, USAID COR, and ILRI participated in the meeting, where the Minister thanked the organizations for initiating a mission to Dakar. The Minister provided contact information for markets in Senegal, suggested transportation rates, and reassured Malian producers, exporters, and traders that they are making improvements to markets, providing subsidized livestock kits at markets, and will work to eliminate barriers from 2015 Tabaski experience.



IMAGES SHOWING A PART OF DAKAR ROUNDTABLE HELD ON JULY 21TH WITH SENEGALESE AUTHORITIES, ECONOMIC ACTORS AND THE DELEGATION FROM MALI

For the Guinean market, the results of the trip were very similar. The Guinean consumer prefers medium-size sheep at a competitive price. L4G distributed the contact list from both sides (Guinea and Mali) of Guinean sheep buyers and Malian suppliers to facilitate and increase Tabaski sales.



IMAGES OF ROUNDTABLE MEETINGS HELD ON AUGUST 9TH AND 10TH WITH GUINEAN AUTHORITIES, ECONOMIC ACTORS AND THE DELEGATION FROM MALI



PHOTO OF GUINEA TRIPS HELD ON SATURDAY 13TH OF AUGUST IN BANKASS WITH MALIAN PRIVATE SECTOR AND FEBEVIM REPRESENTATIVES

Following both delegations, L4G hosted a meeting in Bankass with producers, transporters, and exporters to present information for Tabaski and organize events (actors from both Bankass, Sevaré and Koro attended). Information was shared on the export of livestock to Guinea and Senegal to elicit a quick response to the significant demand during the transaction of the sheep of Tabaski. L4G provided support Tabaski sales campaigns by:

- relaying market information to Livestock sellers' platforms and their members,
- pursuing discussions with wholesale buyers and transporters from Senegal and Guinea,
- developing stronger links with regional Malian buyers and with Government officials (for fair and stable prices); and
- relaying market price information from Bamako to regional/local markets.

MAJOR LEARNED LESSONS FROM SENEGAL AND GUINEA TRIPS FOR 2016 TABASKI OPERATION

1. To strengthen export market for Malian livestock, the trips served to establish business linkages between livestock fatteners, traders, and exporters with Senegalese and Guinean buyers and importers;
2. The economic benefits for the Malian economy generated by the two trips remain below of expected sales for 2016 Tabaski;
3. The delay before the Tabaski Festival was not enough to promote the exchange of contacts between buyers and sellers of sheep to enable them to negotiate and achieve major business transactions. In the future, this type of trade linking should be done much earlier to give economic stakeholders more time to achieve the sales operations to the satisfaction of the actors concerned;
4. Senegalese buyers who contacted fatteners supported by L4G in Koro reported two days after the date of transactions; they wanted to buy on credit. The fatteners who had gathered the sheep for the Senegalese buyer finally opted to rent a truck to export Tabaski sheep to Abidjan. The economic benefits of this last-minute initiative seem to be globally;
5. Guinean buyers came in Bamako and contacted the FEBIVIM asking to buy Tabaski sheep on credit, without guarantee or letter of credit. Other Guinean buyers came and have bought Tabaski sheep they shipped to Guinea but in bypassing the Guinean representation in Bamako;



SALOMON SAGARA, L4G EXPORT TRADER FROM KORO CERCLE WITH SOME OF HIS SHEEP FROM TABASKI

6. The discussions started on the terms of sale and payment should continue to lead to consensus and arrangements or agreements that facilitate and ease the operations of sale and purchase of cattle for export markets, such as Guinea or Senegal.

DRAFT GUIDE TO LIVESTOCK EXPORT

The process of developing a guide for exporting livestock has begun and must continue to create a comprehensive document to strengthen cattle export capabilities. All persons wishing to participate in the cattle export trade in the Republic of Mali are required to meet the following conditions:



MARKET FOR SMALL ANIMALS AND RUMINANTS FOR TABASKI IN YOUDIOU, KORO CERCLE

- Holding an exporter's tax number (NIF), which is obtained at the local tax office;
- Having a valid import license; and
- Registering with the Register of Commerce at the Commercial Court.

Once these three conditions are met, the person requesting the trade license must create an Intent to Export (IE) with the Directorate of Regional Trade and Competition (DRCC) or the National Directorate of Trade and Competition. The request must include An Order of Transit (OT) from a customs agent and a bill of sale to the buyer. The animals must be accompanied by a Certificate of Sanitation issued by the Animal Health Services.

Additional information will be collected for this guide L4G will create, including the cost of legal fees, transportation documents, ECOWAS and UEMOA documents, and good practices of exporters, transporters, and supplies carriers.

COMPONENT 3: STRENGTHENED LOCAL CAPACITIES AND SYSTEMS

4.2 STRENGTHENED CAPACITY OF LIVESTOCK ACTORS

L4G has engaged civil society actors in the livestock value chain throughout the FY2016. This includes FEBEVIM, FOFBEV, APESS, and local livestock networks. L4G distinguishes between actions with the public sector, private sector, civil societies, and POs, which can operate as both private sector and CSOs.

TASK 4.2.1 BUILD THE CAPACITY OF KEY PUBLIC SECTOR ACTORS IN THE LIVESTOCK VALUE CHAIN TO MANAGE DONOR FUNDS

L4G worked with several key public sector actors through collaboration, assessment, and analysis in areas such as operational procedures, transparent funds management, use of hardware and software computer system, and other key areas of capacity building to better manage donor funds and address any gaps through project assistance. This included working with organizations such as PADESO, the GOM Services for Social Development Department (SSDD), and various government leaders.

L4G conducted an analysis of PADESO's internal control systems (levels and requirements for decision-making, procurement, inventory system accounts, physical management of inventory, accounting systems, petty cash management, and bank account management). L4G finalized its report in January

2016, which found inconsistent financial management procedures, comingling of funds in project bank accounts, weak systems of inventory controls, and no employee job descriptions. PADESO was very open to the analysis and appreciative of the constructive feedback. L4G is continuing to work with PADESO to address these findings.

L4G's Senior Program Manager also visited with PADESO director to learn about its experience in promotional livestock sales for Ramadan and Tabaski to Bamako. This resulted in a considered collaboration with PADESO, DNPIA, and L4G for group sales to Bamako for L4G clients in Mopti Region.

TASK 4.2.2 ENGAGE PRIVATE SECTOR ACTORS TO DEVELOP INNOVATIVE APPROACHES TO MEET MARKET STANDARDS AND REQUIREMENTS, AND VIEW LIVESTOCK PRODUCTION AS A BUSINESS

From October 14-16, L4G COP and DCOP led an in-service training of trainer's workshop for 18 L4G staff and two private veterinarians on helping POs, women, and youth groups to develop simple written business plans. Other staff training covered use of basic math and marketing skills to calculate value-added margins to facilitate product sale beyond local markets and further along a supply chain, and a review *Dolique* and *Moringa* production (PowerPoint presentations). Staff developed four prototype business plan examples (beef-fattening, sheep-fattening, multi-nutritional salt licks, and irrigated *Dolique* production). For the value-added marketing exercise, L4G staff participants worked in small groups to calculate additional revenue from sheep sales beyond Koro into the Bamako market. After the technical training, private veterinarians and L4G staff provided cascading training PO members and leaders.

In February, the COP also met with FEBEVIM representatives to discuss the Abidjan Livestock Fair, their funding from the Swiss Cooperation, and the process of institutional strengthening. To build their capacity, L4G trained FEBEVIM's new staff on management, operations, and transparent accounting. L4G field staff engaged and trained community level producers and herders, including training sessions for village activity leaders on cattle and sheep fattening techniques in Djenné, Mopti, and Bandiagara cercles. The various sessions were facilitated by L4G and local Services of Livestock and Animal Industries of Bandiagara, Djenné and Mopti and 196 producers (including 99 women) were trained.

The participation-based training covered six modules including: the definition of fattening, the selection criteria for choosing animals to fatten, animal health and disease, livestock fattening, equipment hygiene in animal fattening, marketing and financial aspects of animal fattening, and while all participants have a basic knowledge on animal fattening, there are improvements to be made in the areas of budgeting with poor consideration of profitability and inadequate tracking of animal health.

To address these issues, L4G facilitated a peer-to-peer session and used practical examples using expenses and revenues to help participants determine profits. This kind activities helped participants understand the value added from animal fattening and to better realize cost, with the goal of generating more profit for local producers. Unfortunately, many townships do not have access to a veterinarian except for Fakala. Thus, the breeders conduct animal deworming and vaccination with products brought in the market.

L4G is working to identify and train additional AEs to aid breeders/producers with vaccinations and deworming. At the end of this session, each participant was given a training document and data collection sheets, which were available in Bambara and French so they could take the information elaborated during the training with them. L4G conducted a similar training in Koro from 28 to 29 July 2016 in Koro for the members of the Koro Animal Fattening Network, comprised of 22 men and 2 women.

At the end of May, 22 men and two women representatives of the Koro Animal Fatteners Network met in Koro to develop their action plan for 2016, their internal operations code, and their partnering MOU with L4G. The Koro Fatteners' Network is comprised of 15 male-only and mixed-gender producer organizations (POs) from Koro Cercle. The group name is Deugoubre ("patience" in Dogon language).

The Deugoubre Fatteners' Network action plan for 2016 includes the following concrete activities: register officially with the Organization for the Harmonization of Business Law in Africa (OHADA); develop simple business plans; apply for MFI or bank credit; train members in improved animal fattening; improve bovine cattle and sheep access to feed and forage; improve herd health by working with the Koro private vet; and improve member sales.

From June 22-25 and from June 29-30, 2016, L4G organized training sessions for trainers (village activity leaders) on cattle and sheep fattening techniques in Djenné Cercle (Madiama, Dandougou, and Fakala township), Mopti Cercle (Sio and Sokoura) and Bandiagara Cercle (Dandoli and Dourou Township). 196 producers, including 99 women, participated in the training. The various training sessions were facilitated by L4G and the local Services of Livestock and Animal Industries (SLPIA) of Bandiagara, Djenné, and Mopti).

Even though all the training participants have a basic knowledge on animal fattening, the areas where their knowledge can be improved include:

- Inability to elaborate an operating budget that can show the fattener if s/he will have profit or lose money by carrying it out (poor consideration of profitability).
- The inadequate tracking of animal health. In effect, almost all the participants themselves buy drugs on the market during weekly fairs with street vendors rather than seek the assistance of a veterinarian.
- Specific examples of fattening operations from participants were reviewed in the peer-to-peer session and used as practical examples for determining profits. During the exercise, participants analyzed expenses and revenues. In one case example from Madiama, after performing the profit and revenue calculations participants realized that each fattener lost between 16,000 CFA and 18,000 CFA. This real-life example helped participants to understand the value added from fattening and to better realize their cost.

Unfortunately, many townships do not have access to a veterinarian except for Fakala. Thus, the breeders conduct animal deworming and vaccination with products brought in the market. L4G is working to identify and train additional AEs to aid breeders/producers with vaccinations and deworming.

At the training a plan to disseminate the information learned was elaborated and each participant benefitted from a training document as well as the data collection sheets. L4G translated information into Bambara for participants that did not speak French.



PARTICIPANTS AT THE DANDOUGOU FAKALA TRAINING 25 JUNE 2016

As part of strengthening capacities of the actors of the livestock value chain, all planned activities were implemented. In Koro: From 28 to 29 July 2016 was held the training of the members of the network of

the Koro herders and individual herders who were not PO client members of L4G, but were from the villages of Gnini in the municipality of Koro, Birga Fulani of the commune of Dougoutene I, and Ganaguinikoro of the commune of Dougoutene II.

Six (6) modules have been discussed with all participants in a direct exchange. These modules are: the definition of fattening, the criteria of choice of animals to cover, health/diseases of animals, food, equipment and hygiene in the workshop of fattening, marketing and financial aspects of the business. Participants in this training all have a basic knowledge on fattening. Their weaknesses lie in not developing a projected operating account activity that would show the herder if they can turn a profit and bad timing for feeder operations that sometime go 4-8 months for sheep, and 4 months for cattle.

A concrete example of an estimated operating farm account was established by L4G for cattle and sheep fattening. The fiscal details of expenditures according to the modules and the income receipts were also determined. Following these calculations, participants realized that Mr. Aly Bamadio from Koro, who was fattening 15 cattle for 3 months, spent altogether 3.9M FCFA in buying the animals, treatment, feeding, habitat and hygiene. He earned 6.1M FCFA (price of animals + 300 cartloads of manure). This represents a profit or a gross margin of 2.2M FCFA. However, it should be noted that the costs have not considered the amortization of the animal shed (hangar) over 5 years neither the cost of the forage (leaves) harvested by his children. These costs were assessed with the help of all participants and included in expenditures. The monetary value of the 300 cartloads of manure was also assessed and considered as an income. It should be noted that all his animals were sold in his shop in Yadianga (Koro).

For sheep fattening, the herder Mr. Moussa Bamadio used an example of a small ruminant in Koro which was considered in the same module as the first example. He fattened 15 sheep for 4 months. So, his total expenses were assessed at 777,275 FCFA and his revenues 1,387,500 FCFA, thus a profit or gross margin of 610,225 FCFA.

None of the herders holds a register to record all information relating to expenditures and revenues. The cattle fattening lasts 3 months and for sheep is 4 months' maximum. The fattening techniques for the different livestock were explained.

The L4G team pursued the training session to Koro fatteners about the herder's database and data entry. Each participant gave information about their names, their circle of origin, the commune of origin, type of activity, herder species, the number of animals returned, the number of rotation, types of animals fattened by rotation, the markets where they purchased the animals, the markets where they sold the animals and contacts.

TASK 4.2.3 BUILD MANAGEMENT CAPACITY OF LIVESTOCK SECTOR ORGANIZATIONS TO HELP THEM BECOME MORE PROFESSIONAL, INCREASE REVENUES AND IMPROVE SERVICE DELIVERY

L4G has continued its effort to evaluate header groups, producer groups, and marketing groups to help groups develop better basic business plans, project their basic operations' costs and potential revenues, as well as potential business diversification strategies. One way that L4G evaluates these groups is by conducting a strengths, weaknesses, opportunities, and threats (SWOT) analysis which is a standard group evaluation tool.

FEBEVIM

During FY2016, L4G continued to support a SWOT analysis and strengthening of FEBEVIM. The L4G Operations Manager visited their operations on December 2 and evaluated their hardware and software computer systems. In February, L4G met with FEBEVIM representatives to discuss the upcoming Abidjan Livestock Fair, FEBEVIM's recent funding award from Swiss Cooperation, and the process of institutional strengthening of FEBEVIM. Once the funding from the Swiss Cooperation is received and FEBEVIM completes its recruitment for new positions, L4G will offer additional training to their new staff on management, operations, and transparent accounts training in FY2017.

FOFBEV

Based on the results of a SWOT analysis conducted in November 2015, L4G supported a self-analysis workshop for FOFBEV with 41 participants that included 10 women to identify key organizational issues and develop a plan to strength their communication and internal capacity. Based on the results of this workshop, L4G trained 45 members in Bankass (32 men and 13 women) in February on PO transparent management procedures, how to democratically elect leaders, how to ensure proper separation of PO powers structures, and tools for creating good business plans.

PRODUCER ORGANIZATIONS

Activities focused on capacity building for POs through collaboration with the GOM Services for Social Development Department to conduct business group training needs assessment. More than 200 POs have now been assessed. Additionally, L4G and the SSDD jointly developed a PO leader training module focused on basic business planning, separation of powers in a business, PO member rights, and operational procedures to help ensure transparent PO management. This module is being used to strengthen the POs' business planning capacity, improve leadership accountability to members, and improve transparent management of profit-oriented producer groups.



PHOTO 1: PO MEMBERS AT L4G TRAINING IN NOVEMBER 2015.

In October and November, L4G implemented two separate four-day governance and organizational management training events in Koro and Bankass, where 141 PO leaders (76 men and 65 women) representing 70 producer organizations (POs) participated. The training focused on principles of democratic PO governance, transparent internal organizational management, development of simple business plans, required processes to democratically elect leaders, and steps to become members of OHADA. L4G will work to ensure that POs incorporate democracy principles into their organizational governance activities and will aid POs to become OHADA members.

L4G extended the governance training to village animators and AEs. Topics focused on democratic group governance, transparent organizational management (including process for democratically elected leaders), and basic business activity planning. Using L4Gs cascade training approach, village animators and AEs trained an additional 235 PO members (162 women) from Bankass Cercle during the quarter.

COMPONENT 4: IMPROVED ENABLING ENVIRONMENT FOR LIVESTOCK SECTOR

Transformation of the livestock sector in Mali requires stronger local organizational capacity and service delivery systems. Private sector actors should take on increased risk and recognize livestock as a business. Livestock cooperatives and federations must become more professional and offer improved services to members that generate revenues and ensure sustainability.

5.2 INCREASED CAPACITY OF CIVIL SOCIETY FOR POLICY ANALYSIS AND ADVOCACY

BUILD THE CAPACITY OF CSOS TO ADVOCATE ON BEHALF OF THEIR MEMBERSHIP TO GOVERNMENT AND DRIVE PUBLIC-PRIVATE DIALOGUE

Capacity building efforts with CSOs such as FEBEVIM and FOFBEV described under Component 3 must be completed before we can successfully build their advocacy capacity. L4G and FEBEVIM collaborated extensively on livestock and sheep trade linkages in West Africa, as described in Component 2. These efforts contribute to private-public sector dialogue.

EXPANSION IN MOPTI AND TIMBUKTU

In 2015, USAID informed AECOM that it had decided to provide additional funding to AECOM to expand L4G activities geographically in the Mopti region and support expansion into the Timbuktu region to provide a tangible peace dividend after the signing of the Algeria peace accord. AECOM provided a proposal to USAID, which formally modified the contract in April 2015. L4G proposed to expand all activities into seven FtF-designed communes in Bandiagara, Djenné and Mopti *cercles* and a select number of activities into six communes in Timbuktu *cercle*.

In April, L4G Senior Technical Staff conducted protocol and information meetings with the administrative heads for Bandiagara, Djenné and Mopti *Cercles*, apprising them on the expansion of L4G program activities to their zones and specific Communes selected to benefit from L4G activities.

Insecurity in Timbuktu region requires a more local approach. Thus, in June 2016, L4G collaborated with a local NGO AMSS to host the L4G Timbuktu program launch. Partnering with AMSS proved to be successful as the organization was familiar with the political, social, and economic landscape, and could quickly mobilize strategic participants. This collaboration demonstrated the true value and efficiency gains in working with an established firm in Timbuktu. The program launch identified 66 L4G villages as displayed in Table 10.

Table 11: Communes and villages selected in the expanded zone in Timbuktu

Cercles	Communes	Number of Villages selected
Dirée	Arham	3
	Tindirma	10
	Bourem Sidi Amar	8
Goundam	Tonka	15
	Kaneye	4
Niafunké	Soboundou	26
Total	7	66

L4G is proposing to partner with a local NGO to implement the programming in Timbuktu. This strategic option, for implementing the market driven project activities focused on development results, is based upon previous AECOM experience in that region (e.g. with MTI/ACCORD Project), the local knowledge as well the working linkages already established by local NGOs. These assets will ease the L4G technical assistance delivery for reaching expected results focused on increased competitiveness of the livestock value chain. Additionally, the security landscape of the country is unstable and from a security perspective, it is preferable to use established counterparts in the north.

A subcontractor has not yet been selected; however, an RFP was released in August 2016. The selected subcontractor, which is expected to start its contract in early FY2017 will work always under the instructions of the L4G management team, the latter providing precise instructions on all activities to be conducted, on the approach to be used and on the objectives to attain while monitoring continuously the subcontractor's performance to ensure smooth operations and achieve the expected results.

In FY2017, L4G and the selected partner will establish an implementation strategy for the new *Cercles* and Commune to continue and increase activities in these new areas. The strategy will follow in general the same approach as for the initial *Cercles* and will engage the livestock organizations and stakeholders in participatory meetings to seek their interest and collaboration.



PHOTO 3: SMALL GROUP WORK TO SELECT VILLAGES
JUNE 9, 2016 AT TIMBUCTOO



PHOTO 3: PARTICIPANTS REVIEW CRITERIA FOR VILLAGE
SELECTION FOR THE L4G PROGRAM - TIMBUCTOO REGION
JUNE 9, 2016.

L4G staff began work in new zones (seven new communes Bandiagara, Mopti, and Djenné *Cercles*) to launch community entry workshops that explain L4G's objectives to government leaders, traditional authorities, Government Technical Services, livestock value chain actors, and other stakeholders. During the launch meetings, the L4G Technical Team communicated the goal, purpose, and objectives to stakeholders. This included L4G's value chain approach and L4G criteria for selecting villages to work with. Following the launch meetings, L4G proceeded to identify potential partner POs in selected villages. Table 11 below indicates the villages selected and POs identified.

Table 12: Communes, villages and POs identified in Bandiagara, Mopti and Djenne

Cercles	Communes	Number villages	Number POs identified
Bandiagara	Dandoli	14	19
	Dourou	19	25
Mopti	Socoura	14	17
	Sio	16	20
Djenne	Fakala	17	12
	Dandougou Fakala	07	20
	Madiama	10	25
Total	7	97	138

After selecting villages and identifying potential PO partners, L4G conducted in May a quantitative and qualitative evaluation of the 138 POs identified, with the following results: 19 POs were found to be strong performers, 46 adequate performers, 47 needing significant support to advance, and 25 too weak to help at this juncture.

On August 15-16, L4G identified 163 producers from FOFBEV and FEBEVIM. Other individual producers have been identified in Bandiagara, Djenné and Mopti, as indicated in Table 13 below.

Table 13: Number and Affiliation of Producers counted in the 3 new L4G zones

Cercles	Community	APESS Members	FOFBEV and FEBEVIM Members	Individuals	Total Participants
Bandiagara	Dandoli	10	0	0	10
	Dourou	10	0	0	10
Mopti	Socoura	10	0	0	10
	Sio	10	0	0	10
Djenné	Fakala	7	1 of 7	61	68
	Dandougou Fakala	10	0	24	34
	Madiama	10	0	11	21
TOTAL		67	1 OF 67	96	163
<i>Note: There is one (1) individual in Fakala who belongs to APESS as well as to FOFBEV and FEBEVIM. "Individuals" do not have any affiliation with any of the organizations, APESS, FOFBEV or FEBEVIM; hence their "Affiliation" is Not Applicable (N/A).</i>					

CROSS CUTTING THEMES

GENDER

Women perform a variety of tasks in the livestock sector, including general agricultural work, alongside maintaining the household and family. They feed animals, clean their stalls, compost manure, and are responsible for breeding and tending to the health of smaller animals. There are important gendered differences in livelihoods, levels of vulnerability, and power relations within the household. Throughout the Bankass and Koro cercles, livestock husbandry is the most important livelihood for women. Men have higher rates of cattle ownership while women are mainly concentrated in small ruminants (goats, chickens, and sheep). Livestock is considered a key asset for rural households and a primary livelihood resource for these rural communities. Access to livestock resources facilitates multiple opportunities, namely the ability to produce food, generate cash income, manage risks, and build up assets.

Women's livelihood strategies leave them highly vulnerable to economic and other shocks. L4G's implementation of its gender plan has focus on integrating both women and youth into program-supported activities. Two primary vehicles to achieve this are through the Women's Livestock as a Business Platform (WLBP) and the Youth Livestock as a Business Platform (YLBP). In FY2016, L4G created Management Committees for several of the WLBPs in Koro and Bankass and dramatically increased the number of WLBP, adding 103 to the 22 established in FY2015. We believe this increase is a result of L4G's inclusive approach that helps vulnerable populations recognize the benefits of

participating in hands-on learning of new skills and technologies to improve household revenues and opportunities to diversify their incomes. Becoming a WLBP or YLBP member also opens immediate opportunities to participate in group-managed internal savings and loan opportunities.

L4G's women and youth engaged in the platforms are showing great enthusiasm for such business activities as: production and sale of multi-nutritional lick blocks, production, harvest, storage, and sale of forage crops, and village savings and loan association opportunities (internal savings and loans at interest rates of 5 percent to 10 percent). The youth and women POs, comprised of 158 WLBP members and 36 YLBPs in Bankass and Koro, have trained women in the production and sale of urea-treated hay and nutritional salt licks. They have also helped to provide women and youth access to land and training in literacy and numeracy. L4G selected and trained platform leaders to collect and record data on: production of quantities collected of forage and grains by crop type, and the value of forage sales.

L4G organized two annual results and planning workshops for the WLBP members – in Koro from March 15-16 with 113 participants and in Bankass from March 23-24 with 128 participants (usually the elected President and Treasurer from each PO member in the Platform). The objectives of the annual workshop were:

- Record success and failures, strengths and weaknesses for the period from April 2015 – March 2016);
- Hold annual Platform elections;
- Develop an action and business plan (April 2016 – March 2017);
- Develop a communication plan;
- Identify WLBP members' needs for Moringa plants;
- Identify PO member credit needs (Explanations to PO delegates on the possibility of accessing credit to construct forage storage warehouses, and purchase and storage of other livestock value chain inputs);
- Training in collective savings and lending (épargne collective) and in basic math for simple profit and loss statements for bovine and small ruminant fattening.

The YLBP annual meeting took place with the same objectives as above for Koro and Bankass from March 17-18 with 52 participants (including 19 teens). There were several trainings held for capacity building in animal fattening, manufacturing and sales, management of mutual fund, accounting for livestock marketing margins, and managing bank accounts for forage. Following the March 2016 meeting, the YLBPs will make plans for next year's activities (between April 2016 – March 2017). Several activities have already begun implementation in accordance with this follow-up action plan, which includes holding monthly meetings and continued training on monitoring and evaluation, the production and sale of salt-licks and urea-hay, and forage production.

The WLBP members and YLBPs are expanding – both in number and in membership. During FY2016, L4G staff and local young people formed 10 new Youth Livestock as a Business Platforms (3 in Bankass and 7 in Koro), with a total of 1,413 new members (958 male youth and 455 teenage girls). Becoming a WLBP or YLBP member also opens immediate opportunities to participate in group-managed internal savings and loan opportunities. L4G has expressed a commitment to linking these groups to other input and services providers in the value chain and to assist these groups in operating more as producer organizations.

Advocacy meetings for access to land were held with communal and traditional authorities for new L4G POs engaged in the WLBP members and YLBPs in Bankass and Koro *Cercles*. The L4G Technical Team's community visits permitted new groups to acquire 51 hectares of land-on-loan with registered

documentation at the Commune Mayors' offices (40.5 ha for 28 women-only POs and 11 ha for 8 youth groups). The land is rain-fed and will be used for forage production.

On May 24, the L4G Gender Specialist participated in the USAID Bamako meeting on Gender Equality and Female Empowerment. The objective of this meeting was to share USAID Mali gender policy and provide training on the first module of gender equality, integration, gender analysis, women's empowerment, and the WEAI. The Gender Specialist will incorporate the training content into her work with special emphasis to comply with the WEAI.

In FY2016, L4G continued its commitment to engaging women in youth in program activities, not only as beneficiaries, but as an integral part of economic growth in the targeted areas. Through mechanisms such as the WLBP and YLBP, L4G can support capacity building and increase access to opportunities. This inclusive approach has done a substantial job at ensuring the overall inclusion of gender considerations in all program activities, including the installation of SVPPs, as was noted in the recent Gender Audit provided by AECOM's Gender Advisor. In the coming year, L4G will continue this work, as well as integrating recommendations from this Gender Audit and the new strategy included in the FY2017 workplan.

L4G has done a substantial job at ensuring overall inclusion of gender considerations as well as attention to explicit challenges faced by youth are both holistically integrated across the project, as opposed to stand-alone activities. For example, L4G ensured gender considerations were integrated into their support to the *Services Vétérinaires Privés de Proximité* (Private Proximity Veterinary Services or SVPP), an animal health network established with the participation of the rural populations and private veterinarians, integrating different actors and veterinary products. L4G is introducing the SVPP model to improve livestock health through vaccinations and disease treatment, increase herd size and quality, and improve profitability. Through training provided to both veterinarians and AEs, 31% of those trained have been women. Collectively, they cover the FTF designated communes in Bankass and Koro Cercles, and the greater number of female veterinarians and AEs being trained enables greater accessibility for women to access vaccinations and disease treatment for their small ruminants. Another example, the L4G project has worked to improve household nutritional practices, an excellent entry point to work with women more directly. In 2016, L4G trained 49 leaders and members from 25 Producer Organizations (POs) based in the Communes of Dimbal and Kani Bonzon (Bankass District). Held at the Institute for Professional Formation (IFP), the training centered on hands-on recipes that use moringa leaves as the primary ingredient. Both the L4G Nutrition Specialist and Gender Specialist conducted the training, with the intent to show PO members and leaders the ease of preparing moringa-based meals to reduce malnutrition and increase consumption of foods rich in protein, vitamins, and minerals from locally available and accessible production.

ENVIRONMENTAL COMPLIANCE

L4G complied with its existing EMMP for implementation activities in FY2016. Please refer to L4G's FY2016 EMMR for detailed activities, compliance, and mitigation efforts.

MONITORING AND EVALUATION

FY2016 has centered on using results based implementation and data to help influence program implementation. L4G invested significant resources to strengthen M&E efforts including the addition of one full time M&E Assistant based in Bankass and short term support from subcontractor ICD. The following section highlights accomplishments and major M&E initiatives. Annex 2 provides indicator targets and results for FY2016.

UPDATED BASELINE and new targets

In April 2016, USAID awarded AECOM an expansion to the Livestock for Growth Program to increase program activities to additional communes in the Feed the Future (FTF) Zone of Influence (ZOI) through expansion of the project management and implementation footprint, and increasing focus on activities in the current scope of work that sustainably promote inclusive livestock value chain competitiveness. Given the additional geographic coverage area, L4G partnered with M&E expert Rayne Loken and Malian based statistics firm AMRAD to conduct an updated baseline assessment that captures baseline figures in new target geographic areas and to obtain baseline figures for new indicators in the existing geographic area.

The objective of the baseline survey was to assess the situation and establish benchmark indicators for the program, to update the project's Monitoring and Evaluation plan and provide a basis for subsequent data collection using improved data collection methods. The baseline commenced in September 2016 and focused on collecting baseline data for the following indicators as benchmarks for performance evaluation in Bandiagara, Mopti, Djenné, Dire, Goundam, and Niafunké Cercles (new):

- Gross margin/head (cattle, small ruminants) disaggregated by sex of producer
- Value of exports of cattle, small ruminants because of USG assistance
- Off-take rate (cattle, small ruminants), by producer organizations, cooperatives assisted by FTF
- Value of incremental sales (collected at farm-level) attributed to FTF implementation
- Total quantity of targeted nutrient-rich value chain commodities produced by direct beneficiaries set aside for home consumption
- Value of Agriculture and Rural Loans (4.5.2 (29))

In addition, the baseline gathered data on goats for the following indicators as benchmarks for performance evaluation in Bankass and Koro Cercles (existing):

- Gross margin/head disaggregated by sex of producer
- Value of exports of cattle, small ruminants because of USG assistance
- Off-take rate (cattle, small ruminants), by producer organizations, cooperatives assisted by FTF
- Value of incremental sales (collected at farm-level) attributed to FTF implementation
- Collect baseline data for the following indicators as benchmarks for performance evaluation in Bankass and Koro Cercles (existing):
- Value of Agriculture and Rural Loans (4.5.2 (29))

Results of the baseline will be included in the updated PMP and IPTT. Given the program expansion, L4G significantly increased the program targets for the following indicators. This increase will be achieved through the program's increase in technical staff.

DISEASE PREVALENCE

To measure changes, progress, and the impact of animal health activities, L4G contracted with LCV do a baseline study assessing the prevalence of parasitic and contagious livestock diseases in Koro and Bankass cercles. LCV completed the field work in March 2016. The study established the baseline, summarized in Table 13 below, for the L4G indicator *"Percent of occurrences of parasitic and contagious livestock diseases in FTF-assisted producer groups/cooperatives"*. LCV found wide variations among the communes and diseases tested, which will help veterinarians to target interventions.

Table 14: Prevalence rates for parasitic and contagious diseases in Bankass and Koro

Cercles	Bankass %	Koro %	Total %
Livestock Contagious bovine pleuropneumonia (CBPP)	4.52	8.93	6.43
Livestock Brucellosis	1.36	.60	1.03
Livestock Tuberculosis	20	0	10.7
Contagious caprine pleuropneumonia	0	0	0
Pasteurellosis	12.93	16.86	14.66
Small ruminant plague	45.57	63.14	56.35
PPR Sheep	57.34	62.64	59.69
PPR Goats	34.08	61.06	47.12
Livestock Foot and Mouth Disease (FMD)	6.33	4.76	5.65
Babesiosis Cattle	26.20	15.50	21.60
Babesiosis Sheep	34.40	19.54	27.81
Babesiosis Goats	34.98	43.18	38.60
Babesiosis Camels	0	4.54	4.17
Gastro-intestinal parasitic infections Cattle	38.46	31.55	35.48
Gastro-intestinal parasitic infections Sheep	39.45	72.65	51.03
Gastro-intestinal parasitic infections Goats	31.84	47.73	38.85
Gastro-intestinal parasitic infections Camels	100	0	100

For cattle, LCV recommended vaccinations against CBPP and FMD on an annual or semi-annual basis. For small ruminants, LCV recommended vaccinations for PPR (annual) and Pasteurellosis (semi-annual). In both cases, LCV recommended treatment of parasites before and after the cold season.

COMMUNITY MONITORING

L4G launched its community monitoring program with 36 (including 11 women) monitors. Community monitors assist with data collection and the identification of new L4G villages, POs, WLBP, and YLBPs. L4G trained the community monitors on community entry, use and completion of data collection sheets. During the year, the cadre of 36 monitors identified 158 new villages and 299 POs and other types of community groups, thus increasing the capacity of L4G to engage with new stakeholders.

IMPROVED SYSTEMS AND DATA COLLECTION

In FY2016, L4G was committed to improving the program's ability to capture and communicate effectiveness and to ensure that the program's impact is represented effectively. In Q2, L4G rigorously assessed ways to improve our monitoring and evaluation (M&E) process and systems to better demonstrate impact, learn from challenges, integrate best practices, increase transparency, and ensure accountability to our stakeholders to improve on the quality and impact of our program interventions, establish and strengthen mutual accountability and learning between ourselves, donors, and the communities. Thus, in FY2016, AECOM partnered with INGO AKVO to upgrading the tools used to collect, analysis, and display program results transitioning from a manual to electronic M&E data

collection system. AKVO designed and build a mobile data collection application and database for our M&E department. Data collected through a mobile-app based system will provide strong audit controls, allow access to ongoing data, a greater understanding of the program's real impact, and increase transparency and accountability. L4G launched the app in August 2016 and will continue to use the app in FY2017 for M&E purposes. This year, the app was used to conduct the program's updated baseline assessment and water point assessment.

To strengthen the program's performance monitoring system and to integrate Feed the Future's updated indicator handbook, in FY2016, L4G contracted technical assistance from an Agronomist M&E Specialist to provide a review and updated the program's performance monitoring system by: 1) developing an internal data quality assessment process; 2) updating indicator survey and PIRS' 3) providing guidance on interpretation of USAID PIRS and indicators to measure Value of Export and Value of Incremental Sales; 4) revising the commodity pricing model to capture all aspects of the value chain and incorporate the sale of goats;) suggesting other models and/or tools that can help measure the program's success. In FY2017, L4G will start using the update survey's and implement the tools originated in FY2016.

In FY2016, AECOM and USAID negotiated additional indicators and targets for L4G. The updated programs updated Performance Monitoring Plan (PMP) includes 29 output and outcome indicators. The revised PMP increased targets and added four additional indicators.

DATA QUALITY ASSESSMENT

The USAID/Mali COR for L4G, M&E Officer, and Environmental Officer conducted a Data Quality Assessment (DQA) on October 6 for three indicators. USAID met with the L4G M&E Specialist, DCOP, and Capacity Building and Partnering Specialist as well as two producers in Sévaré. The L4G action plan for the DQA is represented in Table 14 below.

Table 15: DQA Improvement Plan

Action plan to improve data quality	Period	Responsible
Provide staff and partners orientation on L4G targets indicators (Validity)	Nov. 2015 and Jan 2016	Ismaila ZOROM and L4G Team
Revise and validate data collection sheets (Validity)	Feb 2016	Ismaila ZOROM
Train and guide project personnel on correct and accurate procedures to fill out data collection sheets.	Feb 2016	Ismaila ZOROM
Provide training and orientation to field-level data collectors (Auxiliary Vets, Village Animators, and others) on the importance of reliability of the data being collected (Reliability)	Feb 2016, May 2016 and July 2016	Ismaila ZOROM Coordinators K+B
Train and guide project personnel and partners L4G on the importance of regular and timely data delivery to the M&E coordinator (Timelines/Precision)	Feb 2016	Ismaila ZOROM Coordinators K+B
Consolidate Timelines/Precision/Integrity of data collected at the level of L4G clients and partners)	Ongoing	Ismaila ZOROM Coordinators K+B
Consolidate the system of secure storage and backup for all data collected (data collection sheets and data input L4G software programs (Integrity))	Jan. 2016	Ismaila ZOROM
Revise the data base and quantification of targets for L4G performance indicators	Jan 2016	Ismaila ZOROM

Action plan to improve data quality	Period	Responsible
Conduct field visits for data control and verification (data reliability) for data collected in PO and other L4G clients' written registers and confront this information collected against data collected in the L4G data collection sheets (integrity)	Nov 2015, Jan 2016, March 2016, May 2016, July 2016, August 2016, Coordinators – every month	Ismaila ZOROM Coordinators K+B Component Leaders
Consolidation of data through L4G staff monthly meetings to get a precise snapshot of planned activities vs achieved results for the current month and planning for next month. Assessment and corrective action on any indicators that are in arrears. (Integrity).	Every Month	DCOP Ismaila ZOROM Coordinators K+B and Component Leaders

On March 2, USAID conducted a Data Quality Assessment (DQA) for five L4G indicators:

- 4.5.2(7): Number of individuals who have received USG supported short-term agricultural sector productivity or food security training (RiA) (WOG);
- 4.5.2(30): Number of MSMEs, including farmers, receiving USG assistance to access loans (S);
- 4.5.2(36): Value of exports of targeted agricultural commodities as a result of USG assistance (for bilateral missions) (S);
- 4.5.2(37): Number of MSMEs, including farmers, receiving business development services from USG assisted sources (S);
- 4.5.2(43): Number of firms (excluding farms) or CSOs engaged in agricultural and food security-related manufacturing and services now operating more profitably (at or above cost) because of USG assistance (RIA).

USAID made specific recommendations, including: 1) advising L4G to develop M&E manuals to ensure accurate data entry; 2) consider both in-kind and in species loans; 3) make improvements to the data collection sheets for indicator 4.5.2 (43): “Number of firms (excluding farms) or CSOs engaged in agricultural and food security-related manufacturing and services now operating more profitably (at or above cost) because of USG assistance (RIA)”.

Based on the DQA and the need to strengthen the M&E system, L4G partnered with Agronomist M&E Specialist Edna Ogwanga to review the USAID Feed the Future Handbook, USAID performance monitoring and evaluation policies and guidelines, L4G monitoring plan, L4G logical framework, existing PMP, and existing program data collection tools. L4G will launch the new tools in FY2017. In addition, AECOM Arlington recruited a new Arlington based M&E Manager who will provide significant technical support in the next year with M&E.

TRACKING INTERMEDIATE RESULTS

Increased inclusive livestock value chain competitiveness is L4G's primary goal. In FY2016, L4G made significant progress towards achieving the desired Intermediate Results outlined in the Program Management Plan, exceeding targets for multiple indicators. Below is a summary of the results, the complete set of which can be found in Annex XX.

IR I: INCREASED LIVESTOCK PRODUCTIVITY

The established indicators under IR I include:

- I. Number of hectares under improved technologies or management practices with USG assistance;

2. Number of farmers and others who have applied improved technologies or management practices as a result of USG assistance;
3. Number of for-profit private enterprises, producers' organizations, water users' associations, women's groups, trade and business associations, and community-based organizations (CBOs) that applied improved technologies or management practices with USG assistance.

"Number of hectares under improved technologies or management practices with USG assistance." In FY2016, improved, dual-purpose seeds were planted on 759 hectares, and micro-dose fertilization practices were implemented. On this land, L4G also promoted use of organic manure and natural assisted regeneration (RAN). Based on the data, L4G exceeded its target, by 446%, to improve the number of hectares under improved technologies or management practices.

"Number of farmers and others who have applied improved technologies or management practices as a result of USG assistance." In FY2016, L4G impacted 25,850 producers through hands-on workshops, cascade trainings, and follow up technical assistance by L4G Staff and L4G extension agents. These producers implemented improved farming techniques, thus, and L4G attained 86% of its target for the year. While this number is significant, several factors contributed to L4G's diminished ability to fully reach its goal, including a delayed signing of the Contract Modification that allowed L4G to proceed with its expansion into new intervention zones, as well as the tumultuous security situation in the region.

"Number of for-profit private enterprises, producers' organizations, water users' associations, women's groups, trade and business associations, and community-based organizations (CBOs) that applied improved technologies or management practices as a result of USG assistance." L4G extension activities enabled 373 organizations and private companies to implement improved practices and technologies, including improve fattening techniques. Thus, L4G achieved 478% of its target.

IR 2: INCREASED DOMESTIC AND EXPORT TRADE

The established indicators under IR 1 include:

1. Value of targeted agricultural commodities exported as a result of USG assistance;
2. Value of Agriculture and Rural Loans as a result of USG assistance;
3. Number of MSMEs, including farmers, receiving agricultural related credit as a result of USG assistance.

"Value of targeted agricultural commodities exported as a result of USG assistance." L4G client livestock exporters sold 3,582 heads of cattle and 3,469 heads sheep to Benin, Burkina Faso, Cote d'Ivoire, and Togo, totaling \$4,606,798 USD in sales. L4G exceeded its target value of focused agricultural commodities exported by 346%.

"Value of Agriculture and Rural Loans as a result of USG assistance." The data collected from L4G clients indicate this L4G target was met by a satisfactory 108%. \$216,896 USD in loans was obtained, of which 67% was from internal PO loans (from PO collective savings accounts), 43% was from MFI loans, and 0% from banks.

"Number of MSMEs, including farmers, receiving agricultural related credit as a result of USG assistance." 162 L4G MSME clients received credit, marking a 165% achievement of this L4G target. There nonetheless remains much to do because only 41% of L4G clients are have received the credit they need to expand their business practices and further contribute to improve livestock value chain growth.

IR 4: STRENGTHENED LOCAL CAPACITIES AND SYSTEMS

"Number of individuals who have received USG supported short-term agricultural sector productivity or food security training." L4G trained 3,308 clients on a multitude of important, focused themes, exceeding its target for this indicator by 221%. Trainings included: Fattening techniques, Sensitization techniques;

Managing activities, Seed production techniques and certification; Using salt lick blocks, forage choppers, and urea-treated hay; Creating and managing forage banks; Reporting follow up; Forage production, storage, and usage; Democratic and transparent management; Activity planning; Livestock as a Business (LAB), Collective Savings; Cooking with Moringa; Double-entry bookkeeping; Calculating business financial margins; and Creating a vaccination plan.

ISSUES, CHALLENGES AND LESSONS IN YEAR 2

FY2016 was a year of learning, revamping, and scaling for the L4G Program. L4G experienced many programmatic, administrative, and operational improvements throughout the year which are accredited to the program's effort to promote a continuous learning, assessing, and redoing.

LIMIT ASSUMPTIONS

USAID launched the Development Credit Authority (DCA) program in Mali, including the Bank of Africa (BOA). L4G was looking forward to the opportunity to expand access to credit for the program's clients as many have faced difficulties in accessing medium to large loans given the strict and discriminating regulations (for farmers). L4G met with the BOA representatives in Bamako and Mopti for months to discuss and plan applications for L4G clients. To the program's dismay, the BOA required significant collateral to issued DCA-backed loans – initially a 50 percent guarantee from the borrower, which is difficult to obtain. L4G proposed several solutions and scenarios to reduce the collateral requirement, which the BOA has yet to accept. Additionally, the BOA has been reluctant to lend DCA-backed funds to MFIs, a preferable option because they have less strict lending guidelines. L4G significantly increased its indicators targets pertained to increasing access to credit as the program assumed the BOA would expand its lending. In FY2016, no L4G clients received loans from the BOA.

CHANGE IN LEADERSHIP AND STRATEGY IMPROVES IMPLEMENTATION

During this year, L4G initiated a review of existing strategies and program initiated studies to refine the program's approach to improve incomes and sales for actors all along the focus livestock value chains. A new private sector-oriented strategy and implementation plan was developed by our short-term consultant and experienced Private Sector Development Growth Advisor, Dr. Thomas J. Herlehy. This new strategy helped the project pivot from an over-emphasis on production activities to a more market and demand-driven approach. This new strategy fully integrates the different L4G program functions to intensify value chain strengthening activities for program clients and value chain stakeholders, it recommended reallocation of resources within the existing budget, redefined key activities and streamlined workflows. L4G's revised strategy is rooted in evidence-based best practices in market-oriented, demand driven value chain development projects.

The L4G strategic review made several important recommendations, including the need to maintain a full-time Chief of Party (COP) and Deputy COP (DCOP) for the life of project, to partner with a Malian firm/NGO to undertake activities in Timbuktu and to revise L4G staffing structure. L4G recruited a dynamic and complementary leadership team. COP candidate, Dr. Joseph Sedgo, brings vast experience in value chains in Mali and is complemented by Senior Program Manager, Josilien Edouard, a Value Chain and Private Sector Development Specialist. They complement the existing DCOP Abdou Yahouza's deep understanding of the livestock sector. They all have extensive West Africa and Mali experience.

EVIDENCE BASED IMPLEMENTATION

In FY2016, L4G sponsored several assessments to better understand needs and feasibility before implementation. This policy was implemented from lessons learned in FY2015. In addition, using an electronic web based data collection app, L4G partnered local consultants with regional technical experts to conduct the assessments. This partnership increased the capacity of the local consultant and helped to ensure quality control with the deliverables. L4G will continue this approach for future assessments.

ANNEX I. L4G TRAINING WORKSHOPS FOR FY2016

Date	Participants	Coverage	Topic	Number of Participants		
				M	F	Total
April 29-30, 2016	POs, VAs, PO Delegates, & Herders	Koro, Bankass	Creating a vaccination plan	85	31	116
December 16-21, 2015	YLBP (youth) PO Members	Koro, Bankass	Calculating business financial margins	14	43	57
December 11, 2016	YLBP and WLBP (women) PO Delegates	Koro, Bankass	Double-entry bookkeeping	15	19	34
April 6-7, 2016	PO Leaders	Bankass	Moringa cooking demonstration	0	49	49
December 17-22, 2015 March 16-18, 2016 March 23, 2016	YLBP and WLBP Members	Koro, Bankass	Collective Savings	24	309	333
October 26-29, 2015 November 2-5, 2015 February 2-5, 2016	PO Leaders, including FOFBEV members	Koro, Bankass	Democratic and transparent management; Activity planning	104	79	183
March 1-2, 2016 March 9-10, 2016 March 24, 2016	PO Leaders, AEs, VAs	Koro, Bankass	Livestock as a Business (LAB)	69	33	102
October 21-23, 2015	Seed Producers	Bankass	Forage production, storage, and usage	22	20	42
June 8-9, 2016	Delegates from YLBP, WLBP, and Animal Fattener Network	Koro, Bankass	Reporting follow up	31	44	75
December 28-30, 2015 January 7-9, 2016 February 24-26 March 9-11, 2016 June 1-3, 2016.	New PO and Platform Members	Koro, Bankass	Using salt lick blocks, forage choppers, and urea-treated hay; Creating and managing forage bank	124	274	398
June 14-15, 2016	Seed Producers	Koro	Seed production techniques and certification	18	1	19
April 26-28, 2016 May 2-4, 2016	AEs and SVPPs	Koro, Bankass	Sensitization techniques; Managing activities	55	18	73
December 9-11, 2015 April 21-23, 2016 June 22-25, 2016 June 29-30, 2016 July 28-29, 2016	Animal Fattener Network and new VAs	Koro Mopti, Djenne, Bandiagara	Fattening Techniques	198	141	339

ANNEX 2. L4G MONITORING AND EVALUATION INDICATOR PROGRESS

Indicators		Target 2016	Results October 1, 2015 – September 30, 2016	% Achieved Results/ Target	Remarks
IR 1: Increased Livestock Productivity					
Farmers Gross margin/head (cattle, small ruminants) disaggregated by sex of producer (4.5(17)) (In \$, 1 \$=500 CFA) (EG.3-6,7)	Cattle	\$48.92	\$246	503%	The rate of improvement has exceeded expectations due to higher prices during Ramadan and Tabaski with animals fattening technologies applied across the L4G program.
	Sheep	\$39.75	\$66.01	166%	
Number of households benefiting directly from USG assistance under FTF (EG.3-1)		10,000	13,906	139%	L4G reached 13,903 households in its area of intervention for this year.
IR 1.1 Enhanced technology innovation, dissemination and management					
Number of farmers and others who have applied improved technologies or management practices as a result of USG assistance (EG.3.2-17)		30,000	25,858 Male: 6,790 Female: 19,068 Technology type: Crop Genetics: 1,138 Cultural practices: 7,687 Livestock management: 25,858 Marketing and distribution: 2,528 Soil-related fertility and conservation: 40 Climate adaptation: 11	86%	L4G reached 25,858 producers this year which represents 86% of the target. L4G did not reach 100 % of the target as the contract to expand in new communities was not issued until April 2016 (it was expected in November 2015; thus, targets were based off a full year of implementation in new zones)- after receiving the contract modification (as specified in the mod), L4G had to mobilize resources and recruit additional staff.
Number of private enterprises (for profit), producer organizations, water user associations, women's groups, trade and business associations, and community-based organizations (CBOs) that applied improved technologies or management practices as a result of USG assistance (EG.3.2-20)		78	373 Type of organization: Producers Organizations: 36 Women's Groups: 158 Private enterprises (for profit): 3 New/Continuing: New: 162 Continuing: 35	478%	Extension activities of the L4G program enabled 373 organizations and private companies to implement improved practices and technologies a completion rate of 478%. By extended technologies, technical fattened as part of the increased production to have more added value is most used is in line with the overall objective of the program.

Indicators	Target 2016	Results October 1, 2015 – September 30, 2016	% Achieved Results/ Target	Remarks
IR 1.2 Increased access to quality inputs and services				
Percent of occurrences of parasitic and contagious livestock diseases in FTF-assisted producer groups/cooperatives	39%↓		0%	In quarter two of this year, L4G partnered with the Central Veterinary Laboratory (CVL) to conduct a baseline assessment of current disease-to measure progress against this indicator CVL will conduct a follow-up assessment in two years. In the interim, L4G will continue to train in animal health and disease prevention.
Number of MSMEs, including farmers, receiving business development services from USG assisted sources	90	197 Male: 39 Female: 158 Size of MSME Micro MSMEs: 197 MSME Type Agricultural Producers: 194 Non-agriculture: 3	219%	This indicator is exceeded as L4G increased its focus on private sector and business development during this implementation period.
IR 1.3 Improved pastureland and water resource management				
Number of hectares under improved technologies or management practices as a result of USG assistance (EG.3.2-18)	170	759 Ha Technology type Crop Genetics: 600 Soil-related: 104 climate adaptation: 53 Sex of owner Male: 498 Female: 254 Association-applied: 7	446%	The target was exceeded because helped producers (particularly women and youth) advocate for increased access to land for forage production. In addition, L4G intensified practical and technical trainings in improved forage production techniques, provided seeds, and fertilizer.
Number of pastoralists or smallholder producer families practicing improved management of pasture and other forage resources as a result of USG assistance	8,000	12,807	160%	Due to the positive harvest results from the previous planting season (in which many clients used improved techniques), for this year, there was a greater adaptation for clients to integrate improved techniques into their practices.

Indicators	Target 2016	Results October 1, 2015 – September 30, 2016	% Achieved Results/ Target	Remarks
IR 1.4 Improved community literacy, numeracy and nutrition and hygiene practices				
Number of households observed to be practicing improved complementary feeding and nutrition	150	279	186%	L4G conducted robust campaigns and culinary demonstration on the dual uses of Moringa which attributed to the program exceeding his expectation. In addition, L4G target schools, women's groups, and markets which allowed for more households to be reached.
Number of people receiving functional literacy and numeracy training	300	622 Male: 261 Female: 361	207%	L4G introduced Livestock as a Business training this year – the demand for the LAAB training was greater than anticipated.
IR 2: Increased Domestic and Export Trade				
Value of targeted exports of cattle, small ruminants as a result of USG assistance (In \$, 1 \$=500 CFA) (EG.3.2-23)	\$ 1,330,567	\$ 4,606,798 Regional Sales Cattle (live) Value of exports: \$ 4,606,798 Volume of exports: 7,051	346%	<p>The data collected from our merchant and exporters during the fiscal year 2015-2016 represents an achievement rate of 346% with a sales volume of 7,051 heads, 3,582 heads of cattle and 3469 heads sheep with a total value of sales of \$ 4,606,798 USD. The countries concerned by these exports: the Ivory Coast, Benin, Togo and Burkina Faso.</p> <p>L4G increased collaboration with livestock associations this year, and hosted two trade missions- the increase in regional collaboration helped the program exceed the initial target.</p>

Indicators		Target 2016	Results October 1, 2015 – September 30, 2016	% Achieved Results/ Target	Remarks
Off-take rate (cattle, small ruminants), by producer organizations, cooperatives assisted by FTF	Cattle	15.71%	28,62%	182%	In FY2015, L4G introduced the concept of Livestock as a Business and Value Chain Strengthening by working with different links in the Value Chain. Once clients understood the concept and the potential wealth that can be created with investing in their businesses, they developed and implemented their business plans, thus the target was exceeded. Additionally, L4G worked hard this year to share market information to clients- this information helped to increase client's awareness and behavior changes. The market information sharing is also attributed to the program exceeding this target.
	Sheep	21.58%	40,15%	186%	
Number of MSMEs receiving US Government agricultural related credits as a result of USG assistance (EG.3.2-3)		80	128 Size of MSME Micro MSMEs: 128 Sex of owner Male: 22 Female: 77 Joint: 29	160%	The PO were considered as micro enterprises. The collected data show 128 micro enterprises that have received credits on an annual forecast of 80 MSMEs. The result is satisfactory but there remains much to do because the companies benefiting from these loans represent only 41% of our assisted companies.
IR 2.1 Strengthened Market Access and Linkages					
Value of new private sector capital investment in the agriculture sector or food chain leveraged by FtF implementation (EG.3.2-22)		\$ 800,000	\$ 668,869	84%	L4G has increased efforts to identify medium and large private investors in the operating area and expect to meet the LOP target.
Number of firms (excluding farms) or CSOs engaged in agriculture and food security related manufacturing and services have increased profits or become financially self-sufficient with USG assistance (EG 3.2-21)		50	66 Firm: 66 CSO: 00	132%	L4G increased its training, linking, and focus on access credit and utilizing internal credit and savings this year which contributed to exceeding the target
IR 2.2 Decreased Barriers to Trade					

Indicators	Target 2016	Results October 1, 2015 – September 30, 2016	% Achieved Results/ Target	Remarks
Number of transporter/trader/cooperatives investing in new trucks or repairs to move cattle and small ruminants into target markets as a result of US Government assistance	3	4	133%	The realization rate of this indicator is accredited in part to the program improving linkage and collaborations with Livestock Associations, and traders/transporters, increasing L4G staff to work on private sector development.
IR 4: Strengthened Local Capacities and Systems				
IR 4.2 Strengthened capacity of livestock actors (public, private and civil society)				
Ability of Ministry of Livestock and Fisheries to accept and manage a FARA analyzed and improved (Milestone based)				
Cross-Cutting Indicators				
Number of for-profit private enterprises, producers' organizations, water users' associations, women's groups, trade and business associations and community-based organizations (CBOs) receiving USG food related development assistance (EG.3.2-4)	100	399 Type of organization Producers organizations: 203 Women's groups: 188 Community-based organizations (CBOs): 3 Trade and business associations: 2 Private enterprises (for profit): 3	399%	The extension of the project in other <i>Cercles</i> in the Mopti region (Mopti, Djenne and Bandiagara) contributed to the program reaching more clients. In FY2017, L4G will increase efforts to identify and collaborate with more private enterprises.
Number of individuals who have received USG supported short-term agricultural sector productivity or food security training (EG 3.2-1)	1,500	3,308 Male: 1,077 Female: 2,231 Type of individual Producers: 3,301 People in civil society: 7	221%	L4G trained the clients on several themes which are: Fattening Techniques, Sensitization techniques; Managing activities, Seed production techniques and certification, Using salt lick blocks, forage choppers, and urea-treated hay; Creating and managing forage bank, Reporting follow up, Forage production, storage, and usage, Democratic and transparent management; Activity planning, Livestock as a Business (LAB), Collective Savings, Moringa cooking demonstration, Double- entry bookkeeping, Calculating business financial margins, Creating a vaccination plan (health).

Indicators	Target 2016	Results October 1, 2015 – September 30, 2016	% Achieved Results/ Target	Remarks
Proportion of female participants in USG-assisted programs designed to increase access to productive economic resources (assets, credit, income or employment)	45%	70%	157%	L4G has a strong gender empowerment and strategy to integrate women into the Livestock Value Chain and to help them progress in the Value Chain which contributed to this target being exceeded.
Proportion of females who report increased self-efficacy after USG-supported training/programming	65%	89%	136%	The strategy for empowering women through practical training oriented towards increasing revenue in the value chain, has contributed more to trust and to undertake income-generating activities.
Value of smallholder incremental sales generated with USG assistance. (In \$, 1 \$=500 CFA) (EG 3.2-19)	\$2,000,000	\$ 1,104,919	55%	The purpose of this indicator includes the new extension of the program areas. This objective could not be achieved due to the following factors: delay in signing the contract extension, many of our clients do not have access to loans to make fattening activity due to difficult conditions accessing MFI credits and banks. The program is working to overcome these challenges in FY2017.
Number of Full-time Equivalent (FTE) jobs attributed to Feed created with USG assistance (EG.3-9)	700	737 Location: Urban:56 Rural: 681 Duration: New: 383 Continuing: 354 Sex of job-holder: Male: 331 Female: 406	105%	The introduction of improved technologies as a source of income increase (fattening, salt like, AE, etc.) helped increase the equivalent of full time jobs in the program's area of intervention.
Number of people implementing risk-reducing practices/actions to improve resilience to climate change as a results of USD assistance	5,000	8,876	178%	The technologies and practices introduced the L4G (improved seeds, micro dose and the natural assisted regeneration, as well as other farming practices) have enabled customers to implement practices of risk reduction/actions to improve the resilience in the face of climate change.

Indicators	Target 2016	Results October 1, 2015 – September 30, 2016	% Achieved Results/ Target	Remarks
Total quantity of targeted nutrient rich value chain commodities produced by direct beneficiaries set aside for home consumption (EG 3.3-11) (Milk)	77,914	77,914	110%	For this indicator, L4G used the results of the study on milk consumption and other products of animal origin produced by the L4G nutrition specialist for the year 2016. L4G will report on other nutrient rich value chain commodities such as Moringa in FY2017.
Number of public-private partnerships formed as a result of Feed the Future assistance (EG. 3.2-5)	4	4 Type of partnerships: agricultural production	100%	L4G worked to improve linkages and partnership between the public and private sector.
Value of Agriculture and Rural Loans (EG.3.2-6)	\$ 200,000	\$ 216,896 Type of loan recipient: Producers: \$ 216,896 Sex of recipient: Male: \$ 60,284 Female: \$ 156,612	108%	L4G reinforced the impact and benefits of collective group savings with PO's which was widely adaptive- the increase in group savings contributed to the program exceeding the target. 67% of the credit distributed was from groups savings and 43% of credit was distributed from MFI's. L4G faced many challenges in linking clients to banks for larger loans due to the bank's lending practices. L4G has shared the challenges to USAID and hopes that UAID and the GOM can help encourage banks to decrease requirements for access to credit for producers and farmers.



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MALI

ANNEX 3. SUCCESS STORIES

SUCCESS STORY

L4G Trainings in Fattening and Business Practices Increase Profits for Herders



Members of a Producer Organization in the village of Ogodengou, Youdiou commune, Koro cercle



M. Drissa BAMADIO, 47, father of 7, resident of Gnigni village, Koro commune, Koro cercle

Telling Our Story

U.S. Agency for International Development
Washington, DC 20523-1000
<http://stories.usaid.gov>

Before the USAID Mali L4G program, herders were using inefficient practices. Fattening cycles were too long, many functioned without an operating account and incurred too many costs relative to their price obtained at sale. To fuel economic growth and increase livestock revenue in L4G's intervention areas of Bankass, Koro, Mopti, Djénne, and Bandiagara cercles, L4G organized workshops to address the frequent financial losses and litigation issues between fatteners and Micro-Finance Institutions (MFIs), which arose due to the frequent inability to repay loans within the agreed-upon time frame. During 2015-2016, L4G program trained 314 people, including 134 women, in fattening techniques and livestock business practices to develop local capacities and to increase household revenues, using fattening as a development mechanism.

Testimony of Ms. Habita SAGARA, 38, President of Yakéné Producer Organization with 60 female members from the Ogodengou village in Koro Cercle. She is married with 6 children.

"We have been infinitely grateful to USAID Mali through its Livestock for Growth Program; its assistance has allowed us to increase our revenue through fattening activities.

Before the L4G program: Last year 20 rams were sold during the Tabaski festival at an average price of 65,000 FCFA per head. The sheep were fattened for more than 6 months and sold for a purchase price offered at the buyers' convenience without calculating production costs or evaluating profitability. At the end of the campaign we didn't know if we had made a profit or not.

With the L4G program: We have benefited from technical trainings in the areas of fattening techniques, market research, operating accounts, and working with MFIs. Thanks to these trainings, our fattening practices have significantly improved. This workshop has reduced the sheep fattening cycle from six months to four. Our partnership with MFIs has increased our access to credit to fatten 40 additional head of sheep. This year we sold our animals at our desired prices, which varied between 80,000 FCA and 100,000 FCFA. We committed 2,500,000 FCFA for production costs and received 3,600,000 FCFA for total trade value of sales, giving us 1,100,000 FCFA in profits."

Testimony of Mr. Drissa BAMADIO, 47, resident of the Gnigni village in Koro cercle. He is a Livestock Trader and member of the Koro cercle fattening network. He is married with 7 Children.

Before the L4G program: "I was very involved in animal fattening and livestock trading, but I did not have a clear notion about calculating production costs, especially the opportunity costs for marketing. Sometimes I didn't realize if an activity was profitable or not. I didn't have an understanding about operating accounts or marketing and many sales intermediaries received significantly more money, to my detriment."

With the L4G Program: "I have been the beneficiary of two trainings: one in fattening techniques and the other in livestock as a business. The assistance from L4G has granted me many positive changes: I have mastered production costs and developed a more simplified operating account which has allowed me to fix my campaign selling price. This year, I have increased the number of animals for fattening by 50% due to my improved understanding of production costs and the application of better fattening techniques (food rationing and adequate vaccination). Last year I fattened 40 head but this year, with reduced production costs, I could fatten 60 head. I had a turnover rate of 4,370,000 FCFA with a gross margin of 400,000 FCFA compared to a gross margin of 150,000 FCFA before L4G."



SUCCESS STORY

Private Proximity Veterinary Service (SVPP) model expands access to veterinary services in Mali's Mopti regio



Mr. Birama Diakité, 50 years old, married with 3 kids, living in Koro.



Mr. Salif Togo, 45 years old, married with 4 children, resident of the Wil Wol, Pel-Maoudé commune, Koro cercle.

Telling Our Story

U.S. Agency for International Development
Washington, DC 20523-1000
<http://stories.usaid.gov>

The *Services Vétérinaires Privés de Proximité* (Private Proximity Veterinary Service or SVPP) model establishes a network of private animal health professionals who render high quality veterinary services (animal care, medicine, vaccination). SVPP encourages private veterinarians to expand beyond vaccination to focus more broadly on animal health, while *Auxiliaires d'Elevage* (Veterinary Assistant or AE) provide animal fattening and health services in tandem with private veterinarians. The services of the AE are more limited, but also more affordable.

Testimony of Mr. Birama Diakité, 50, married with 3 children, living in Koro.

"First, I would like to thank the Livestock for Growth Program (L4G) and USAID for their noble acts in regards to me and the entire population of their beneficiaries. Before L4G, I provided small services (consultations) for local NGOs in the Mopti region and often volunteered as a vaccination agent along with one of my veterinarian colleagues. Despite holding a Veterinarian Degree, I have had a difficult time finding a stable job that utilizes my degree. Thanks to the assistance of L4G, I was certified to work in nine communes in Koro. I have also been a beneficiary of technical and financial assistance as a part of the L4G program. After about a year of assistance, I am very proud of my accomplishments, mainly my contributions...through the implementation of mass vaccinations and increased access to quality health benefits for herders. Additionally, thanks to the SVPP put in place by L4G, I can earn a good living and even help create jobs for others around me. I work permanently with 3 Auxilaire d'Elevage (Veterinary Assistant or AE) and an additional 15 AEs during the campaign period. From January to September 2016, I vaccinated 60,213 cattle and sheep and dewormed 5,493 head in 172 villages. I earned 5.5 million FCFA and made a profit of 1.3 million FCFA."

Testimony of Mr. Salif Togo, 45 years old, married with 4 children, resident of the Wil Wol village, Pel-Moundé commune, Koro cercle. Veterinary Assistant for L4G.

"Prior to the SVPP network for AE from the L4G program, I was a simple herder who volunteered along with other agro-breeders in this cercle. Because of the L4G capacity building received, I have acquired technical knowledge and practices, which has improved the success of my business. With the assistance of Veterinarians from Koro, ours and surrounding villages have successfully received vaccinations and access to small-animal health care. I have also won notoriety for my financial planning capacity. I became an example and a source of inspiration for many young people in this village. During the 2015-2016, I could vaccinate 1,142 animals in the village. I earned 2,335,450 FCFA, making a profit of 1,588,150 FCFA. In addition to my activities with the SVPP, I also conducted fattening activities with advice from L4G. I have been thankful for USAID throughout its Livestock for Growth program for providing me with the work that has allowed be to become more independent and better serve the needs of my family."

